DRUG AND COSMETIC INDUSTRY

SEPTEMBER 1938

CONTENTS

EDITORIAL	277
NEW AND NON-OFFICIAL	278
DRUG ACT PROGRESS	280
THE F.D.A. AND A.M.A.	282
MONTHLY COSMETIC SALES	284
FALL FASHIONS AND COSMETIC SALES	285
THERAPEUTIC VENOMS	286
HORMONE PRODUCTS	290
TOOTH PASTE DEVELOPMENTS	293
COSMETIC PADS	296
ABSORPTION BASES	298
RESEARCH IN PHARMACY	301
MERCHANDISING NEWS	309
PACKAGING NOTES	312
PACKAGES OF THE MONTH	314
LEGAL ANGLES	317
NEWS	321
INDUSTRY'S BOOKS	335
PRODUCTION FORUM	337
COMPOUNDERS' CORNER	349
PERFUMERS' SHELF	352
ADVANCING THERAPY	355
READERS' QUESTIONS	362
PURCHASING DEPARTMENT	366

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A PROPER STAND

THE question of whether or not the Food and Drug Administration has the right to proscribe products under the Federal Food, Drug, and Cosmetic Act has been answered so far as the view of the Administration is concerned. Enforcement Chief Campbell states that he will not allow the sale of dinitrophenol regardless of precautionary statements on the label which point out its danger and advise that it be used only under close supervision of a physician. Mr. Campbell states that, according to the literature on the subject, medical supervision cannot, or its cautious administration will not, obviate its harmful effects.

CERTAINLY if the power granted to the Food and Drug Administration in the new law to remove from the market products which are dangerous to health is to mean anything, the Administration could take no other stand in a case of this kind. There is no good reason why products known to be dangerous in the large majority of cases should be sold to physicians. It is well known that physicians as a group are woefully lacking in knowledge of chemistry and therapeutics, so why allow them to be sold something which is very likely to cause real trouble.

THE tragedies resulting from dinitrophenol, which product was first brought to attention in this country through the Journal of the A.M.A., and the tragedies resulting from Elixir of Sulfanilamide, indicate clearly enough the Food and Drug Administration must protect the medical profession as well as the public from blunders on the part of the drug manufacturing industry and those in the medical profession who rush into print with untried products. The drug manufacturing industry will gain a great deal in the long run if the Food and Drug Administration uses this section of the law to the fullest extent.

NEW and NON-OFFICIAL

INQUIRIES FROM COSMETIC MANUFACTURERS regarding the labeling requirements of the new Federal Food, Drug, and Cosmetic Act are coming in every day. Cosmetic manufacturers are very anxious to live up to the requirements of the new law, but they do not know what to do. And until the regulations for the enforcement of the new law are promulgated, no one can advise them with certainty.

Practically all of the inquiries are with reference to label statements. Many manufacturers are about to order new lots of labels, packages, cartons, and they want to be certain that the label statements are right so that they will not have to make another change later on and perhaps destroy large lots of labels, or packages when the law becomes fully effective on June 25, 1939.

The only advice we can give them in advance of the publication of the regulations is that they be as certain as possible that all claims are truthful and backed by facts; have the complete name and address on the label; be certain that everything that appears on the label of the immediate container also appears on the outside carton or wrapper, unless this wrapper is transparent. An honest intent to live up to the law is always looked upon with favor by the Food and Drug Administration. These enforcement officials are reasonable in many instances, and they can tell from experience whether a manufacturer has made an honest effort to conform with the law, or if he disregarding the law until he is caught.

THE NEED FOR ADDITIONAL PERSONNEL and a larger appropriation for enforcement of the Federal Food, Drug, and Cosmetic Act becomes apparent as Mr. Campbell finds it necessary to create new positions to take care of the new phases of the new law. Mr. Campbell has found that he needs Dr. Durrett as a close advisor rather than as Chief of Drug Control. This means another man has to leave another position and take over the duties of drug control. At least two men will have to devote all their time to cosmetics. Then the questions of food standards, certification of colors for drugs and cosmetics, consideration of new drugs, toxicology of products, and many others arise.

Certainly, the Food and Drug Administration has its work cut out for it, and while considerable preparation was made by the Administration for the enactment of the new law, the next few years will be extremely busy ones for the enforcement officials. We do not believe that the manufacturers have to fear drastic action on the part of officials so long as the manufacturers seek to cooperate with the Administration rather than buck it.

IT STRIKES US THAT THE NEW drug and cosmetic law, which requires approval by the Food and Drug Administration for the marketing of new drugs, and the Wheeler-Lea Act, which requires that advertising not only be true, but give all the facts regarding the use for which the product is advertised, will aid the products which are already established and will tend to create a status quo in this industry. Bayer's Aspirin can be effectively advertised with the Bayer cross and no claims, Unguentine can be effectively advertised with the same slogan "First Thought in Burns, Fletcher's Castoria can be effectively advertised with the famous slogan "Children Cry For It", and so on. But how is a new product going to be put over?

ENFORCEMENT CHIEF CAMPBELL'S LATEST RULING that sulfanilamide products are subject to action by the Food and Drug Administration if they are available for indiscriminate use by the public sheds new light on the manner in which Mr. Campbell is going to use the powers given to him by the new law. He states that sulfanilamide is a dangerous product except when used by a physician, and therefore when it is sold over the counter to laymen it is subject to seizure. While we agree with Mr. Campbell's interpretation of the powers given him in this instance, we wonder just how the manufacturers are going to be able to prevent over the counter sales of such products as Mr. Campbell may cite. Warnings on the label might or might not be considered sufficient, but the final responsibility for this type of sale should really rest with the pharmacist.

The difficulty with holding the pharmacist responsible is that the FDA can act only in interstate commerce and must cite the shipper, not the receiver. Perhaps the effect of this ruling by Mr. Campbell will be that the states and cities will act against the sale of sulfanilamide products over the counter and in this way make local enforcement against the pharmacist possible. Such a step must be taken before manufacturers can fully satisfy the demands of the FDA. The only other way would be for the FDA to act against the retailer because the product had moved in interstate commerce in a manner contrary to law.

THE U. S. P. IS TAKING MANY IMPORTANT steps to improve its position in the face of the new powers granted to the Food and Drug Administration under the new law. Suggestions are being made to do away with the political character of the U. S. & P. Convention and thus make the one to be held in 1940 scientific in character as it should be. Delegates of associations would have to be bona fide members of the associations they represent. Also delegations from association would vote as a unit, rather than having each of the three delegates from each association cast his own ballot. This would prevent the men from the East being placed in the position of delegates from the West who do not at-

tend, and it would stop a great deal of the political trickery that has occurred in the past.

But beyond this, the U.S.P. Revision Committee is studying the packaging requirements of U.S.P. XI since the new Food, Drug, and Cosmetic Act will require that U.S.P. products be packaged as specified in the U.S.P. Also the Revision Committee now has an advisory committee on sterile products such as bandages, gauzes, cotton, and adhesive. This committee has been formed in response to a request by the Food and Drug Administration for standards for these products.

Also the Revision Committee is setting standards for concentrates of vitamins A and B in oil. These concentrates are to be from natural sources. This will take much of the mystery out of the vitamin situation and the public will know what it is getting.

With the new federal law requiring that the U.S.P. Revision Committee makes changes in standards when a request is made by the Food and Drug Administration, the matter if interim revisions becomes much more important. For this reason it is essential that the members of the Revision Committee be always available and active in their work.

The U.S.P. has to keep in step with the times and apparently it intends to do so. The next few years will be crucial ones for the U.S.P., but if the delegates to the 1940 convention are of the proper mind, the U.S.P. will be with us for a long time to come. Otherwise, this power might very easily fall into the hands of the government.

WHILE PRICE MAINTENANCE GOES ON its merry way and are being made to prove that the public is not paying anymore but the druggists are making more profit, the manufacturers are now fully realizing that the competition has been thrown back in their laps. Products of manufacturers cannot be priced above the general market any longer as their use as loss leaders is no longer available to move them. The public will not pay the sharply higher prices for the product of one manufacturer when products of good quality are available at more reasonable prices. For this reason many price reductions have taken place and more will come. This is the only way that the public could pay the same for their products and the druggists make more profit. Certainly the money for the additional profit must come from some place, and it is going to come more and more from the profits of the manufacturers.

ACCORDING TO OUR CHART OF COSMETIC SALES, the cosmetic business remains in high ground compared with other industries. While the cosmetic business is not as good as it was last year, it still is far above where it was a few years ago. The movement of the chart seems to follow the trend of general business charts, but the movements are far less sharper. Apparently the cosmetic business is still expanding and the business probably has a long way to go before it attains maximum growth.

"How the hell do I know what the Food and Drug Administration is thinking?"

IT IS EXPECTED THAT THE REGULATIONS for enforcement of the Federal Food, Drug and Cosmetic Act will be ready for presentation to a public hearing some time in November. When these regulations are drawn up by the Food and Drug Administration, the fight over the new act will be revived. There will be a real battle over these regulations if we do not miss our guess. But the battle will be of comparatively short duration since, like it or not, the act becomes effective next June 25 and nothing but an act of Congress can extend that date. It is to be expected that the Food and Drug Administration will write into the regulations everything that they can think of, but the public hearing will probably bring about some changes. It will be a great help to manufacturers to have even the first draft of the regulations, for from these some idea of how important points of the law are to be enforced can be gathered.

THE FALL CONVENTION SEASON is now starting, and this is the season of conventions at which the sales departments are busy. What with the Chain Store Convention at the Westchester-Biltmore, the Federal Wholesale Druggists at Chicago, and the National Wholesale Druggists at White Sulphur Springs, the sales managers will spend a large part of this month and next away from their desks.

STILL ANOTHER MEETING FOLLOWS the chain and wholesale meetings and that is the meeting of the Drug, Chemical, and Allied Trades Section of the New York Board of Trade which is to be held at Skytop, Pa., on Friday and Saturday, October 21 and 22. Since it gets dark early that late in the Fall, it is planned to hold the golf in the mornings of the two days, and to hold the meetings in the afternoons. There is still another angle to the idea of morning golf, and that is that the members will get up early to play golf while they will not get up early to attend a meeting.

The plans for the meeting give great promise for a successful party. On Saturday evening a beefsteak is planned on a mountain top. The program committee is very busy and interesting speakers are promised for the two days. For the drug and cosmetic people, information will be given on the Food, Drug, and Cosmetic Act and the Wheeler-Lea Act, and for the chemical manufacturers information will be given on wage and hour legislation, labor relations, and other broad problems of management.

There seems to be little doubt that this meeting will be well attended and members of the Section are being asked to make their reservations early if they want desirable accommodations. The Section has placed a limit of three hundred upon the attendance at the meeting.

DRUG LAW

RESPONSIBILITY for the safety of new drugs and medicinal products will be a joint responsibility of the Department of Agriculture and the drug manufacturers, in the opinion of Walter G. Campbell, chief of the Food and Drug Administration, in charge of enforcing the new food, drug and cosmetic law. In discussing this point with Drug and Cosmetic Industry recently, Mr. Campbell took issue with the view of drug trade representatives that either the government or the manufacturer would be responsible, depending upon whether a product is put on the market after the manufacturer has received notification that the department has not refused to permit the manufacturers' application under Section 505 (d) to become effective, or manufacturers, particularly small ones, may possibly proceed to put out a product, on the theory perhaps that it is not new, without applying to the department for approval.

It is an open secret that certain federal food and drug officials do not like the idea of the department being responsible for the safety of new drug products under applications filed by manufacturers. Certain officials are reported to have indicated that the department will seek to avoid or evade such responsibility wherever possible. In the opinion of trade representatives, however, the department cannot dodge such responsibility when applications are made to it for marketing a new drug product. Asked about this conflict of opinion, Mr. Campbell said:

"Under an administrative law of this character it is inevitable that responsibility must be joint as between the manufacturer or producer and the administrative or regulatory authority. Any sort of supervision carries with it responsibility for the consequence of the work with which it is identified. But there can be no such thing as assumption of responsibility by regulatory authority under our form of government which would involve complete divorcement of responsibility by the producer or manufacturer. Therefore, as I have said, joint responsibility is inevitable."

While refusing and denying complete responsibility under the new law, Mr. Campbell and his collaborators in the department say that it is not possible to set up exact standards of safety for new drugs. Discussing this point in response to questions from Drug and Cosmetic Industry, Mr. Campbell said:

"No safety yardstick is possible for new drugs under the Food, Drug and Cosmetic Act of 1938. If we were dealing with one product or one type of product it might be possible, but when dealing with such a variety as is represented by the whole field of drugs, that manifest reaction in various forms, I don't see how it would be possible to set up a yardstick. The only thing to do is to survey the situation as regards a particular product as exhaustively as possible and obtain information from experts in a position to express opinion about the particular product involved.

"A legal definition of safety is not possible other than that given by expert opinion as provided for in the law. If there were some legislative way for writing a standard for safety of drugs, there would be no administrative difficulty. But we cannot standardize such things as flavor, color or appearance. The only thing to do is to leave the question of safety to others qualified to speak intelligently about it."

Mr. Campbell stated his purpose is to "try to bring about expeditious administrative functioning to the extent that is consistent with the department's obligations and the applications it receives under the law." He expressed the opinion that exceptions in cases where the department withholds approval of a new drug will be comparatively few.

The definition of safety will inevitably get into the courts. As explained by Mr. Campbell, this will come about on appeal from action of the Secretary in rejecting manufacturers' applications.

Campbell made it clear that scores if not hundreds of inquiries and letters, and a comparatively few formal applications under Section 505 have been received by the department. Many communications, apparently intended to be applications, are regarded as incomplete by department officials and are being returned to manu-

PROGRESS

By H. C. HALLAM

facturers with requests for additional information. It is explained that under the first regulations issued by the department under the new law the Secretary of Agriculture cannot accept incomplete applications. A complete application is a formidable document of many pages containing formula, test results, expert opinions, chemical, biological, pharmacological and other scientific data.

Department experts have been at work drafting blank forms upon which applications under Section 505 shall be made. These blank forms will be incorporated in new regulations to be issued later and on which hearings will be held probably in October. At that time, before the new regulations become effective in final form, ideas and suggestions of trade and professional interests for modification and amendment of the regulations will be received and considered.

The Food and Drug Administration, it is understood, feels the necessity not only for additional appropriation for enforcement of the new law, but also for an increased personnel, including provision for specialized legal advice. The need of specialists in administrative law is felt and it is understood that steps have been taken to obtain such assistance. The new law is regarded by Mr. Campbell and others familiar with it as pioneering in the field of administrative law.

New laboratories to work on problems arising under the new law are planned by FDA with the assistance and cooperation of the Public Works Administration. An allotment by the latter agency for new construction at the Beltsville, Maryland, plant of the Department of Agriculture, located between Washington and Baltimore, is expected, for new construction. FDA has for some time been carrying on work at that station, especially along the line of testing the effect of insecticides upon insects. A number of the latter are bred at this station, it is understood, and the effect upon their depredation, on a 29 acre farm, is observed to determine whether insecticides are as represented by the manufacturers.

No cosmetic control plans have yet been formulated by Mr. Campbell and his associates except those that are necessary as regards cosmetics dangerous to health under limited provisions of the law which became effective immediately. In that connection, FDA has announced first seizures under the new law of several lots of eyelash and eyebrow preparations containing the coal tar product paraphenylene diamine. Such products, according to the department, are alleged to have caused death and partial or total blindness.

Mr. Campbell tells DRUG AND COSMETIC INDUSTRY that his agency has already started a comprehensive study of the whole cosmetic field, primarily to acquire accurate knowledge of its scope, because it is a new field upon which FDA is entering, with the exception that in the past it dealt with so-called cosmetic preparations for which therapeutic claims were made, which it classified as drugs. FDA is understood to be carrying on these investigations with the cooperation of the Toilet Goods Association and other groups in the industry. One of the main purposes of this investigation is to ascertain the availability of coal tar dyes that can legally be used both in cosmetics and certain drugs. The law forbids the use of coal tar dyes that have not been certified except in certain hair dye preparations. It provides for an elaborate scheme of setting up lists of approved dyes. Mr. Campbell pointed out that this requires examination of many samples and certification of particular batches of dyes, from time to time.

The act contemplates payment of fees by the cosmetic industry for this service of testing and certification of dyes. In that connection Mr. Campbell says that FDA must set up agencies for handling this work. He stated that he wants to do this as soon as possible so that the industry won't have any lag during which they would not be able to obtain certified dyes.

FDA believes that a great many more dyes and different dyes are used in the cosmetic field then are absolutely necessary. It is understood that Mr. Campbell does not believe that there will be sufficient time available just now to permit a complete study of the toxi-

(Continued on page 295)

THE F.D.A. AND A.M.A.

UNDER the power granted to the Food and Drug Administration by the Federal Food, Drug, and Cosmetic Act to approve new products and to rule off the market products dangerous to health, it appears as though the power of the A.M.A. is on the wane. Certainly the power of the Food and Drug Administration is far greater than that of the Council on Pharmacy and Chemistry of the A.M.A. For the Food and Drug Administration can, under the powers granted to it under the new law, prevent the medical profession from receiving products which some of its members might want. By these new powers, the Food and Drug Administration becomes the final body to approve or disapprove all medicinal and cosmetic products, subject only to the power of the courts.

In the recent opinion given by Enforcement Chief Walter G. Campbell concerning dinitrophenol tablets, it is evident that the FDA understands its powers and is going to use them in the proper manner to protect the public not only from over-the-counter sale of dangerous products, but also from physicians who might seek to use dangerous products on their patients. For in this opinion Mr. Campbell stated that cautious administration under the close supervision of a physician could not obviate the harmful character of dinitrophenol, and therefore the product was misbranded in that it is dangerous to health in the dosage prescribed.

It must be remembered that the Elixir of Sulfanilamide, which caused all the trouble, was an ethical product sold to physicians. Perhaps the A.M.A. had never seen it. But nevertheless, the medical profession used it and the deaths resulted. Therefore, the A.M.A. can no longer be entrusted to protect the public from dangerous products even though these products are only to be used by physicians. It has been definitely proven that the A.M.A. cannot control its own members in the products that they use, and the new law places this responsibility squarely in the hands of the FDA.

The A.M.A. never was right in seeking to place upon the manufacturers the responsibility for all the tragedies that occurred. True enough, glib talking detail men have convinced unsuspecting physicians to use dangerous products on occasions. But we distinctly remember that the first attention called to the use of such a product as dinitrophenol appeared in the A.M.A. Journal. It was after the publication of articles in that journal that manufacturers offered tablets. Also physicians have sought to develop products themselves, and considerable experimenting is part of the medical profession.

The difficulty with control of ethical products by the A.M.A. is that an over-the-counter sale always follows the use of any product by a physician. And quite naturally manufacturers have often had an eye on this type of sale and are anxious to see it grow. It was this type of sale that caused some cities and States to restrict to physicians' prescriptions the sale of barbiturates, sulfanilamide, and other products. The A.M.A. never had sufficient power to control the channels of drug distribution any more than the manufacturers ever had sufficient power for this purpose, so it is only natural that they should be superceded.

Just last month Enforcement Chief Campbell issued a statement to the effect that sulfanilamide and products containing sulfanilamide must not be distributed for indiscriminate use by the general public. He states that sulfanilamide is a valuable drug "when the dosage is properly adjusted to the requirement of the individual patient and the frequency of dosage and duration of treatment are intelligently and expertly directed." Therefore Mr. Campbell acts under the same part of the law in which he has acted in banning the sale of dinitrophenol, only in this case he will allow sulfanilamide to be sold in interstate commerce for use by physicians, but not for use by the general public. This places upon the manufacturer the responsibility of carefully checking his distribution of these products, and of obtaining the assurances of his distributors that over-the-counter sale will not occur. An action of this kind by the FDA will probably result in most states and cities taking like action against pharmacists.

With the Food and Drug Administration approving new drugs and ruling off the market dangerous ones, the A.M.A. Council on Pharmacy and Chemistry will probably be relegated to a place of minor importance. The F.D.A. will exercise control over what products physicians can have as well as what the public can have.

For these reasons, it is the opinion of many leading drug manufacturers that the A.M.A. will rapidly decline in importance so far as drug products and cosmetics are concerned as the FDA exercises its new powers. Doubtless, the Council on Pharmacy and Chemistry will continue to function in giving advice to members of the association who ask for it. Also, the Council will undoubtedly continue to publish the results of its findings in the Journal and try to exercise what control it can over the products offered. But Council approval will now mean much less to a manufacturer than it did before. All a manufacturer has to do now is to state that his product is approved by the Food and Drug Administration, and that will mean that the product is safe and is properly labeled. Furthermore, if the Federal Trade Commission has taken no action against the manufacturer for his advertising, the statements made in the advertisements are true in all respects, and all the necessary warnings are given. Therefore, it will not be necessary to obtain either the approval of the Council or the Good Housekeeping Seal for the public to know that a product is not dangerous.

The Council can be expected to continue its blasts against those who do not exactly as the Council thinks is right, but manufacturers will pay less attention to these attacks as time goes on, and after the Food and Drug Administration becomes firmly established in its extended field, manufacturers will pay practically no attention to the Council. The matter of trade-marks will be one point that the Council will continue to battle over, since these will not be subject to regulation by the FDA.

It is very likely that the A.M.A. will seek to advise the FDA in its work, and it is very likely that the FDA will lean upon the Council to a marked extent. But this does not make the Council important to manufacturers. The A.M.A. never was bashful in telling the FDA what it thought, and it tried on several occasions to wield power through influencing the FDA. It will be recalled that at the Pharmacopoeial Convention of 1930, Dr. Durrett of the Food and Drug Administration was lined up with Dr. Morris Fishbein in a threat to introduce legislation for a government pharmacopoeia if their man was not elected Chairman of the Revision Committee. For this reason, Enforcement Chief Campbell, who has now advanced the same Dr. Durrett from the position of Chief of Drug Control to that of Technical Advisor, will have to continue to keep a level head on his shoulders.

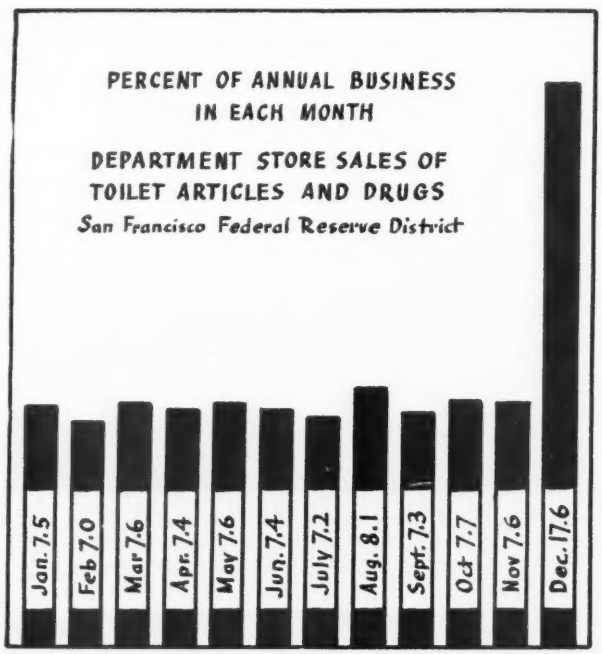
It can easily be seen that the influence of the A.M.A. in the decisions of the FDA might be considerable if the FDA was headed by the wrong chief, or if the Secretary of Agriculture leaned too strongly toward those in the seat of power in organized medicine. However, under the present regime, the Enforcement Chief will probably take advice from the A.M.A. to a certain extent, but he will make his own decisions. The FDA will probably use the Council in the same way as it uses the U. S. Pharmacopoeia Revision Committee. In the case of the U.S.P., the FDA requests the Revision Committee to change standards or to set up new ones for products which have not as yet been standardized and the Revision Committee complies with the request. Recently the U.S.P. set up a committee on standards for sterile products at the request of the FDA. These standards will cover such things as cotton, gauze, bandages and adhesive tape. The FDA is actively engaged in controlling these products under the old law as well as under the new but it needs assistance in setting up the standards which it is to enforce.

It is just as well that the Revision Committee is willing to comply with such requests from the FDA, for the reason that under the new law the FDA could set its own standards if the Revision Committee did not comply with these requests. But at the same time it is not improbable that an amendment will be added to the law forcing the medical profession to aid the FDA in like manner. The A.M.A. is far from the independent body that it once was just as the U.S.P. is far less independent than it formerly was. The rebellions within the ranks of the A.M.A., the Federal action against the

(*Continued on page 300*)

MONTHLY COSMETIC SALES

THE San Francisco Federal Reserve District retail sales statistics used in this analysis of seasonal variation include department store sales in San Francisco, Los Angeles, and the cities of the Pacific Northwest. Although these regions would probably show different individual behavior in drug and cosmetic sales, data for the separate cities has not been analyzed. Although it would be better to be able to attempt to predict seasonal sales by cities, this data for seasonal geographic areas still remains usual in determining promotional expenditures.



Christmas sales of toilet articles and drug sundries show a quite high upswing, December sales averaging 17.6 per cent. of those for the whole year. As if to counterbalance this activity, however, sales in other months are quite uniform, varying from 7.0 per cent. of the total in February to 8.1 per cent. in August. Percentage of the total sales of the year for each month are as follow: January, 7.5 per cent.; February, 7.0 per cent.; March, 7.6 per cent.; April, 7.4 per cent.; May, 7.6 per cent.; June, 7.4 per cent.; July, 7.2 per cent.; August, 8.1 per cent.; September, 7.3 per cent.; October, 7.7 per cent.; November, 7.6 per cent.; and December, 17.6 per cent.

These figures show the percentage of business done in each calendar month but are less accurate in showing the actual trend of business, since the months are of different lengths. Placing all months on a thirty day basis and then adjusting the figures so that they total to 100 per cent., sales percentages by months are as follow: January, 7.3; February, 7.6; March, 7.5; April, 7.5; May, 7.5; June, 7.5; July, 7.1; August, 8.0; September, 7.4; October, 7.6; November, 7.7; December, 17.3.

In other words, toilet goods department sales fall off in January, increase somewhat in February and remain steady for the succeeding months through June, decline in July but rise to a high for the year (excluding December) for August, fall off to average again in September, increase slowly through October and November until they reach the Christmas level in December.

Apparently the West Coast climate, at least to some extent, lives up to its favorable publicity and consumers of toilet preparations do not migrate far from department stores during the summer months. Moreover, the uniformity of sales throughout the year, aside from the great rise for Christmas buying, permits the expenditure of promotion money in almost any month with reasonable assurance that it it will not be wasted on a slack period. These seasonal variation studies are made after the effect of trends has been removed; a period of rising business will give the later months a larger proportion of the annual business.

AMERICAN HAIR DESIGN INSTITUTE

FALL FASHIONS AND COSMETICS

By LILLIAN TRAUB

SHALL the hair be up or down this season? Whichever milady chooses, we are probably in for the most interesting coiffure and fashion season in many a year! What with the new leg-o'-mutton and Dolman sleeves, gorgeous brocades, rich velvets, ostrich feathers, tons of massive jewelry, furs of great bulk, veils, jewelled side-combs, and all of the 1900 frou-frou that threatens to be the rage, the spotlight will automatically be turned on cosmetics. What would all of this sumptuous ornamentation be without a beautiful complexion and the perfect harmony of a fragile make-up?

The "up" hair-do is not entirely new. It has been on the way since '35, but now since the Paris couturiers have taken it to their hearts and created clothes to complement it, the "up" hair-do is probably here to stay for a while. At any rate, it is too good a bet for the hairdressing industry to pass by. Concentration on it means more work for them and the comb, hair ornament and hairpin people who will also profit by this trend. Earrings which haven't been in the fashion picture for some time will surely be back to fill in the gaps that the up-swept coiffure may make. Enthusiasm is high and the possibilities certainly seem limitless. The hairdressers may have to do something eventually to modify the upswept coiffure so that it will lend itself to the girl in moderate circumstances who cannot afford to run back and forth to the beauty shop in an effort to keep her upswept coiffure looking "right." Modification will also no doubt help the milliners. However, that is something that will have to work itself out.

Brilliantines, setting lotions, and any other hair preparations which might be created to help the "up" coiffure stay up, are an absolute necessity. Necks which have long been a neglected area by most women will now *have* to look right, and create possibilities for "neck cosmetics." The chin line will also need lots of attention. Eyes will have to look young and sparkling under the small, coy, befeathered hats and will need preparations to help erase fatigue lines and plenty of make-up to give them that alluring look behind the tiny veils. Loads of "junk" jewelry including great enormous rings, calling attention to the hands will necessitate perfect fingernail, hand and arm grooming.

Other fashion trends for Fall of importance to cosmetic manufacturers are cosmetic shades. The romantic galaxy of colors from pale orchid pink through light cerise and crimson, to dark raspberry and mulberry, amethyst, yellow, grey—much less black—will need something besides last summer's lipstick, rouge, face powder and eye make-up shades. These fall fashion colors shown at their recent Paris openings will need entirely new make-up shades to complement them.

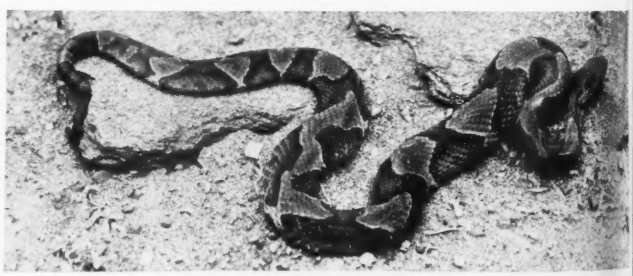
THERAPEUTIC VENOMS

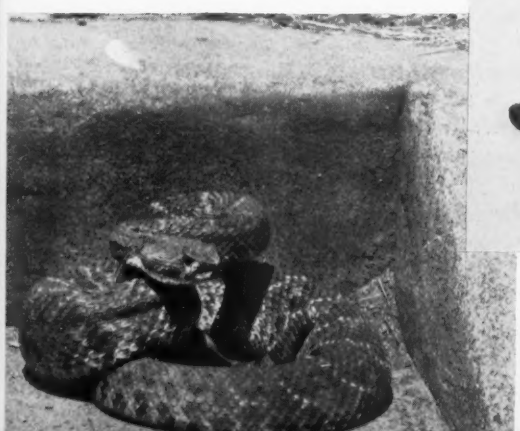
"THE modern pharmacologist," remarks D. I. Macht,[1] one of the authorities on the use of snake venoms, "is continually and increasingly impressed with the remarkable fact that there is no line of demarcation or sharp distinction between drugs and poisons. All drugs worthy of the name may become poisons when injudiciously employed. Conversely, almost all poisons, or at least a very large number, may be employed as valuable medicines. It is apparent that snake venom, on the whole, is no exception to this rule. Many a virulent poison has proven to be a useful therapeutic agent, and the number of serpents which, pharmacologically speaking, "have no charm," is rapidly diminishing." Snakes have been a highly esteemed source of medical agents for centuries, and in many parts of the world, reptiles are still enjoying high, though empirical, repute and usage. "Snake oil," usually faked, is still sold in this country. A preparation made with snake ingredients persisted as an official remedy in France until as late as 1884. The snake is deeply and subtly entwined in all medical lore,—witness the serpents on the staff of Aesculapius. The scientific basis for the therapeutic applications of snake venoms, however, is fairly recent and the actual study of such uses dates back but a few decades.

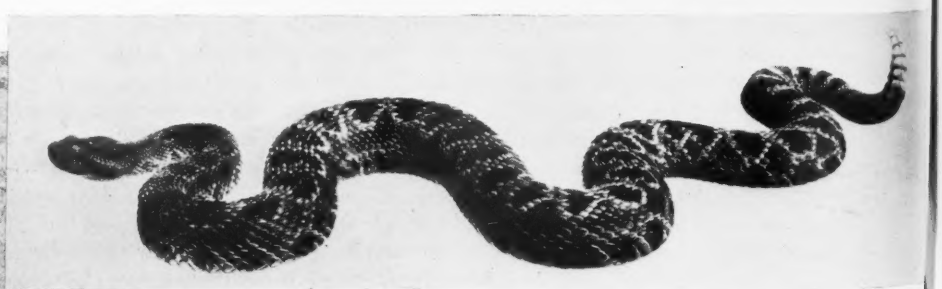
Biologically, the venomous snakes belong chiefly to two species, the Viperine and Colubrine families.[2] Pharmacologically, however, the snakes, or rather the venoms, may be divided into three classes on the basis of their therapeutic usefulness. In the first group will be found rattlesnake and similar venoms, which have been used to treat epilepsy. In the second class are the venoms of the moccasins, vipers, and tiger snakes which have found wide usage in the treatment of varied hemorrhagic conditions. The third, and perhaps the most interesting group, which is mainly represented by cobra venom, is used to relieve pain caused by malignant growths and other conditions.

The job of extracting the venom, or "milking snakes" is hardly an enviable one, but the technique has been well established. The venom is collected, free from contamination by the other secretions from the mouth glands, by forcing the snake to bite through a piece of rubberized cloth or rubber sheeting stretched over a glass receptacle. In another method, the fangs of the snake are held to the lip of a glass cup into which the venom is discharged by squeezing the poison sacs, which are situated just below and behind the eyes. Gentle massage on these glands helps to produce the maximum yield of venom.

The venom thus obtained is a clear liquid, which varies in viscosity. It is frequently colorless, but usually varies in this respect from a straw color to a bright yellow. The venom usually contains a little cellular



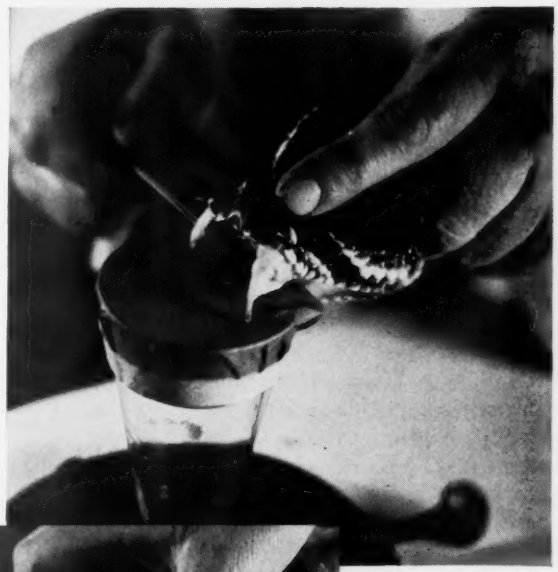




By M. A. LESSER

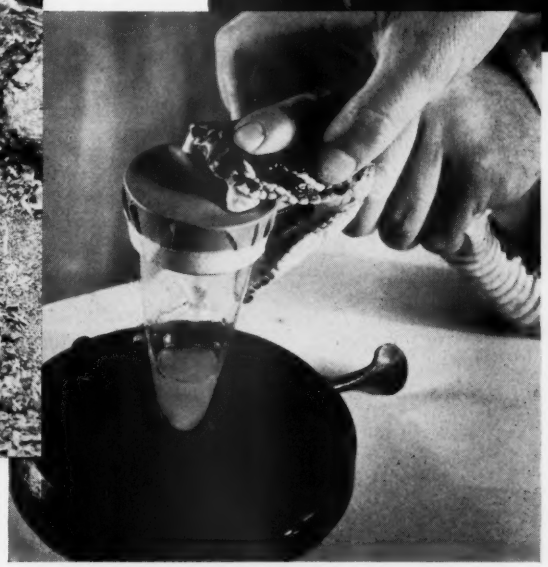
PHOTOS COURTESY OF SHARP & DOHME, INC.

debris. When dried, venoms form white or yellow-white pseudocrystalline scales. This should be powdered and dried over sulfuric acid, *in vacuo*, to insure complete removal of all water. After this thorough drying, the venom is sealed in glass ampoules, and will retain its activity for years. It is in this dehydrated form that snake venoms are usually received to be made into therapeutic agents.



According to Kellaway,[3] in addition to water, venoms contain variable quantities of pigments, small amounts of ether-soluble substances, salts, chiefly chlorides and phosphates, heat coagulable proteins, proteoses, and sometimes, peptones. Wyne's[4] listing of snake venom constituents is, perhaps, more specific. Among other substances he lists various toxins, especially neurotoxins, hemorrhagin, antibactericidal substances and agents which attack the cardiac muscleclature. The venoms cannot be considered simple substances, but are complex chemical compounds, of a protein nature, which exert many varied effects on the body.

Different groups of venoms produce different types of physiological responses when given in toxic quantities. One large group of venoms, of which the Indian cobra is



an example, causes paralysis of the skeletal muscles. Death by asphixia results when the chest muscles are affected. Another group, exemplified by the rattlesnake causes circulatory failure through various mechanisms, such as dilation of the veins, obstructions in the circulation to the lungs, or by constriction of the vessels in the kidneys. A third group of venoms, such as those from the Bothrops of South America, causes coagulation of the blood. In small quantities, these tonic substances prevent clotting—a reverse action. Many venoms cause disintegration of the red blood cells, this action is attributed to an enzyme or a catalyst present in the blood. When injected subcutaneously or intramuscularly, in therapeutic quantities, the venom solutions are rapidly absorbed. Given intravenously, the action of venom is rapid, and may cause death. Many patients develop a hypersensitivity to snake venom, one symptom of which is a hot tender swelling at the point of injection. In many instances, however, the patient can be desensitized to the offending venom preparation. Repeated minute doses is one recommended procedure.

Macht points out that considerable skill and precautionary measures must be utilized to render snake drugs effective. First the venom must be carefully standardized. Strength is determined by biological assay and usually reported in terms of mouse units, though rat units and rabbit units are also employed. Secondly, the venom solutions, usually made by dissolving the dried venom in the desired quantity of physiological salt solution, must be sterilized. Since the venoms are heat labile, sterilization may be achieved by filtration methods. One advocated method of preserving these solutions is by the use of glycerine. Taylor and his associates[5] have found that coagulant solutions of daboia venom (1 in 1,000) in 50% glycerine retain their coagulant properties for a long time and are reactive even when diluted to make a 1 in 10,000 solution. One commercial preparation of Fer-de-lance (Bothrops atrox) venom solution is mixed with an equal amount of pure glycerine after filtration sterilization. No other preservative is added. This preparation, a 1 in 5,000 dilution of the venom in 50% glycerine, is ready for use in certain local hemorrhagic conditions. Last, but perhaps most important, the dosage must be carefully determined. The dosage and the type of venom must be used to suit the needs of each patient and each condition. These will be more fully discussed under the individual applications of the venoms.

Rattlesnake venom has been used to treat epilepsy. This use, however, has been more or less discarded chiefly because of the difficulty in obtaining suitable patent preparations. Solutions of rattlesnake venom are very unstable, being readily affected by heat. They decompose even at ordinary room temperature. Light also lessens the potency of these preparations. Finkelman[6] tried using a moccasin venom solution in a series of eight epileptic cases. His results were very disappointing. Not only did the venom fail to improve the conditions, but it made the patients more susceptible to epileptic seizures.

It is in the relief of many painful conditions that snake venoms are achieving some of the greatest victories. In 1929, Dr. Monae-Lesser had occasion to observe a leper with neuralgia who had been bitten by a tarantula. He noted that as a result of this spider sting, the pain in that area disappeared for a time. Further investigation led to the development of snake venoms (and other animal poisons) for the relief of pain. Monae-Lesser employed a rattlesnake venom solution on a series of 115 patients suffering pain from various forms of cancer. Pain was relieved in almost every case. The cancerous growths in a few instances became somewhat smaller.[7] Today the venom obtained from both the Indian and Egyptian cobras have found widest usage. These venoms have been found particularly useful in relieving the agony of advanced malignant growths such as cancer, sarcoma and other tumors. To some degree, these venoms have proven effective in other painful conditions such as various neuralgias, chronic arthritis and other non-malignant ailments. The studies of Macht and others indicate that the analgesic or pain reducing properties of cobra venom resemble those of morphine and other opium narcotics. The area injected is not anesthetized. The action of cobra venom on the pain areas of the brain is, however, very similar to that of the morphine drugs. The two groups of drugs work in a different manner. Snake venom takes longer than morphine to produce its effects, but once the venom injection has taken hold, its analgesic effects persist much longer. Venom injections have the advantage of not producing narcotic symptoms or other similar untoward reactions, a distinct advantage[1]. To obtain the best results, according to Bagnasco and his associates,[8] the venom solutions should be freshly prepared, since they deteriorate in from six to eight months. The solutions are given intramuscularly, after ascertaining the condition of the cardiac and excretory apparatus of the patient. In cancer cases, treatment begins with small doses and is increased rapidly in the next few injections to the largest dose (0.0001 gram). If more than this is given, great care must be taken since the toxic quantities vary from 0.0001 to 0.0015 gm. The frequency of repeated injections depends upon the condition of the patient. Where improvement is noted, the drug need be administered at longer intervals. This therapy is said to control pain in 70% of the cancer cases where it is used. Patients with tumors which cause great compression do not respond as well to the venom therapy.

Typical of the beneficial results obtained with cobra venom are the twenty-three cases of inoperable and incurable carcinoma of the gastrointestinal organs reported by Kirshen[9]. In most of these instances, the effect of the injections was to reduce the pain and improve the general condition of the patient. Appetite was restored and strength increased. Analgesia, without the after-effects of narcotics which cause mental

depression, had an additional favorable psychological effect upon the patients. Morphine use was reduced to a minimum.

It should be mentioned that cobra venom therapy is incompatible with the administration of iodine, gold or silver salts, and radioactive substances.

Cobra venom solutions have also been used in the treatment of arterial hypertension. Smaller doses are used in this condition, the injections are first given at weekly intervals and then at longer periods, depending upon the patient's blood pressure. Dosage must be watched. Patients with grave cardiac disturbances, aortitis or cardiac insufficiency do not respond well to this treatment. This venom preparation has also been used in cases of epilepsy.

The tearing pain of tabes dorsalis necessitates opiates in ever increasing quantities, and even these quickly lose their effectiveness. It is interesting therefore that cobra venom has been successfully used to relieve the lancinating pains and in avoiding the gastric crisis of this condition. Hypodermic injections of this drug have achieved excellent results and this treatment has been used for the last two years at the psychological and neurological clinic of the University of Vienna, in Austria. Rottmann[10] reports on ten patients with tabes dorsalis who had persistently resisted every other type of therapy but who were relieved by injections of cobra toxin. The dosages must be made to fit the individual case. Overdoses produce untoward reactions such as vomiting, diarrhea, headache, sweats and dazed conditions.

Although there has been no extensive study in this connection, cobra venom has been mentioned as being useful in the treatment of chronic arthritis. It is believed by some, that the beneficial action, and the relief obtained with snake venoms in arthritis may be attributed to a reaction rather similar to that noted when foreign proteins, like milk and typhoid vaccine, are injected.[11] Macht, however, is of the opinion that the relief is due to the analgesic action of the cobra toxin. In Europe, venom-containing preparations for the treatment by the injection route of acute and chronic joint rheumatism, neuralgias, and sciatica, are available. A salve, which contains snake venom, among other ingredients, is used for similar purposes. This rub preparation is also recommended for use in allergic asthma and colds of all types.

More recently, cobra venom has been employed in treating certain aspects of Parkinson's disease (paralysis agitans, shaking palsy). Since certain patients with this condition suffer from severe pains, Gayle and Williams[12] decided to try the pain-relieving action of cobra venom on eighteen patients with typical symptoms of parkinsonism. Subjective symptoms, rather than objective symptoms were relieved in 67% of the cases. The attitudes of the patients were improved, they were encouraged, more cheerful and less nervous. Relief from pain was the most striking effect of the cobra venom injections. Muscle rigidity appeared less and they were able to perform tasks previously impossible. With this toxin treatment, most of the patients were able to decrease or entirely omit other medicines. The patients who failed to be relieved were older than the average and the duration of the disease much longer. These investigators believe that cobra venom has a cumulative effect when given intramuscularly. Other workers, however, do not share this view.[8] Cobra toxin may be substituted for drug therapy in certain cases of paralysis agitans. Macht, too, has found that cobra venom is of value in Parkinson's disease, on six cases of which he reported at a meeting of the American Physiological Society.

Cobra venom has also been used to relieve the suffering in such conditions as tic douloureux (a spasmodic facial neuralgia) as well as other forms of neuralgia.

Definitely established in modern therapy is the use of several snake venoms for the control of various hemorrhagic conditions, by causing clotting of the blood, and in certain other ailments connected with blood or blood vessel abnormalities. These may be obtained for local application or for hypodermic administration subcutaneously or intramuscularly. Even the worst form of hemorrhagic disease has been aided—hemophelia, in which the blood fails to clot and in which condition there exists a constant fear of death due to bleeding. Sterile solutions of the venom of Russell's viper in dilutions of 1:10,000 or more have been found effective as local applications in sufferers from this disease. Some consider the fer-de-lance venom more effective than Russell's viper venom. It also has the advantage of being cheaper and more readily available.[11] To use these solutions, the loose clot is washed away from the bleeding point and tampons soaked in one of the preparations is applied. Thus it is now possible to repair wounds or carry out minor operations, such as dental extractions, on hemophelic patients which would formerly have proven fatal.

Also valuable in several pathologic conditions, though failing to clot blood in hemophelia, are the toxins of the Australian tiger snake and the native moccasin snake. Coagulating venoms, as distinguished from the injected type of toxin, are considered superior clotting agents when used as local hemostatics. Rosenfeld and Lenke[14] found tiger snake venom effective when other local agents, such as pressure, thromboplastin, tannic acid, epinephrine, adrenalin, and ferric chloride had failed to relieve the bleeding. They recommend that pressure be applied over the bleeding point for several hours after the use of the toxin to prevent recurrence of the hemorrhage. The advantage of coagulant venoms over other local hemostatics is that it requires only the presence of fibrinogin to produce a firm fibrin clot. The venom also hastens clot retraction. Collaborating factors such as thrombokinase, calcium or prothrombin are not required. Recently, Rosenfeld and Lenke[15] were granted a patent on the use of coagulant snake venoms. According to the patent, among the poisons that

(*Continued on page 294*)

THE ENDOCRINE

"Unlike desiccated thyroid tissue, desiccated parathyroid preparations are ineffective when administered by mouth, and beneficial results claimed for them in the past merely exemplify the danger of uncontrolled clinical optimism."

IN MAN, the parathyroid glands are usually adjacent to the dorsal surface of the thyroid gland, but vary in number and in location. Heinbach found four glands in over fifty per cent. of the cases studied, and over half of them were located opposite the middle third of the thyroid gland. The parathyroid glands are yellowish-red to brown-red in color, and vary in size from 3 mm. to 15 mm. in length, and from 2 mm. to 3 mm. in thickness. Not infrequently are small accessory glands found near or embedded in the thymus.

The parathyroid glands are quite vascular. Transplantation experiments suggest that these glands can function satisfactorily in the absence of all nerve connections. The glands are composed of epithelial cells, which form a compact mass or are subdivided into lobules by strands of vascular connective tissue, which convey the capillaries. There are two types of cells, viz., small ordinary or principal cells which are clear or somewhat granularm, and larger cells which contain oxyphil granules.

It is believed that these probably represent a functional stage of the ordinary or principal cells. Both forms of cells show fatty granules or minute spherical globules, which become more numerous with age. At times, small colloid vesicles are observed, which also increase in number with age.

Gley, in 1891, first demonstrated that experimental removal of the parathyroid glands produces tetany, and the association of complete parathyroidectomy and tetany has been confirmed again and again by many investigators since that date. MacCallum and Voegtlin showed that the tetany which follows complete parathyroidectomy is associated with a fall of about fifty per cent. in the normal calcium content of the blood, and that the intravenous injection of calcium salts temporarily removes the symptoms of tetany. Because of these facts, it was concluded that the parathyroid glands regulate the calcium metabolism, and that the acute symptoms which follow complete parathyroidectomy are caused by the subsequent fall in blood calcium. MacCallum and co-workers demonstrated that the hyperexcitability of nerve, which characterizes tetany, may be induced experimentally by lowering the blood calcium.

Within recent years a great amount of experimental work has been done on the calcium of human blood and especially on the state of inorganic combination of calcium in the blood plasma. From the standpoint of the production of tetany, the amount of calcium present in the ionized condition is the fact of greatest importance, but unfortunately exact knowledge is lacking. The change in the calcium content of the blood which follows complete parathyroidectomy certainly suggests that the parathyroid glands possess a direct or indirect control over the concentration of the blood calcium. The results of experimental efforts to determine whether the non-diffusible or organic calcium, the diffusible or inorganic calcium, or both are effected, permit no definite conclusions.

In addition to the production of tetany and the drop in the blood calcium, parathyroidectomy induces a retention of phosphorus, as the third major acute effect. Since complete parathyroidectomy rapidly causes

COMPOUNDS

THE PARATHYROID GLANDS

By A. RICHARD BLISS, Jr.

death, and the partial removal of these glands is rapidly followed by regeneration adequate for the restoration of a normal condition, the effects of chronic hypoparathyroidism cannot readily be studied in most mammals. Accessory parathyroids are generally absent in the rat, and parathyroidectomy is rarely fatal in this animal. The effects of the chronic condition in the rat include a partial decalcification of the bones; the teeth become brittle, opaque and distorted, with disorganized enamel and exostoses of alveolar bone. Analyses showed the bones low in ash, calcium and phosphorus, but relatively high in magnesium. Since the bones are also denuded of calcium in hyperparathyroidism, the results are not readily explained.

Desiccated parathyroid preparations, unlike desiccated thyroid tissue, are ineffective when administered orally. The beneficial results of such administrations which have been reported during the past serve to stress the danger of uncontrolled clinical enthusiasm. All of the early work to obtain an active extract of the parathyroids failed to establish beyond a doubt the presence of an active principle in a concentrated extract. Success was not achieved until 1924 when Collip presented his conclusive evidence of the presence of an active principle in the concentrated extract he obtained from these glands.

Collip's method consists in boiling the fresh, minced parathyroids with diluted hydrochloric acid for from thirty to sixty minutes; cooling; and removing the fat. The pH is then adjusted to 8.0 or 9.0 until the suspended material is dissolved, and again to 5.5 when a precipitate is formed. This is filtered off, and the active principle is salted out of the filtrate, redissolved in diluted alkali, and purified. The active principle has not been obtained in definitely established pure crystalline condition. But the chemical properties of the purest preparations thus far obtained indicate that it consists essentially of a protein. It is precipitated by picric and picrolonic acids, and gives the protein color reactions. Tests for carbohydrates are negative. Analysis of the dried material shows 15.5 per cent. of nitrogen, and traces of sulfur and iron. The substance is soluble in water and in 80 per cent. ethyl alcohol, but it is insoluble in acetone, ether, and pyridine. The dried substance and weak acid solutions are stable. When boiled for sixty minutes with 10 per cent. hydrochloric acid or 5 per cent. sodium hydroxide, the physiological activity is completely destroyed. Incubation with pepsin or trypsin also results in destruction of activity. This explains why the oral administration of the parathyroid active principle is ineffective. The substance does not dialyze through a collodion membrane, and Tweedy and collaborators, in 1932, presented evidence that its activity is associated with the presence of a primary amino group.

Present knowledge concerning the effects of the active principle of the parathyroids constitutes convincing evidence against the old theory that the function of these glands was essentially the detoxication of guanidine compounds, a theory which arose from the detoxication obsession referred to in the first article (The Drug & Cosmetic Industry, July, 1938) of this

series, and which aided for awhile in retarding the advance of endocrinology.

The relationship of vitamin D to calcium metabolism suggests an interrelationship between that vitamin and the active principle of the parathyroid glands. Hess and his coworkers observed that rachitic children who were given moderately large doses of a vitamin D concentrate sometimes showed a hypercalcaemia, and concluded that this effect was due to stimulation of the parathyroids by the vitamin. If this were true, then complete parathyroidectomy should prevent the effect. They demonstrated that there was no elevation of the blood calcium following the administration of vitamin D concentrate in parathyroidectomized dogs and monkeys. Others have shown that the administration of large doses of the vitamin to parathyroidectomized dogs maintains them in good health at a normal calcium level, and that this treatment has apparently been beneficial when tetany follows human parathyroidectomy. Such successes are clouded by the possibility that all parathyroid tissue had not been removed, and that the residual traces had been stimulated to compensatory action by the vitamin.

As pointed out in the November, 1937 issue of this journal, available evidence suggests that vitamin D controls the distribution of calcium, and, directly or indirectly, of phosphorus in the blood and bony tissues, and that its presence either leads to increased absorption of calcium and phosphorus from the intestine (or depresses the excretion of calcium and phosphorus into the intestine). There is no conclusive evidence that the active principle of the parathyroid glands affects the absorption of calcium. The results which may follow overdosage of vitamin D depend largely upon the availability of calcium. If the diet provides ample calcium, then hypercalcification ensues; if there is a dietary deficiency in calcium, bone is denuded of calcium, and this may result in metastatic calcification.

Known facts make it still uncertain whether or not the active principle of the parathyroids is in any way controlled by vitamin D, and there is no evidence which suggests any control in the reverse direction. The most outstanding facts have permitted the following statements concerning the active principle of the parathyroid glands. Bone deposition or denudation depends upon the concentration of the active principle. Slight dosage of the active principle, and, therefore, probably the normal action of the principle, facilitates bone deposition. Increased parathyroid action, if sufficiently prolonged, reverses the procedure. Why continued overdosage affects this reversal is unknown. Vitamin D controls the absorption or excretion of calcium and phosphorus through the intestinal wall. It affects bone structure when present in marked excess; its possible effects on bone under normal conditions are not known. The relative constancy of blood calcium probably represents the result of rough equilibria depending on the rates of absorption and excretion from the intestine, and the degree of bone deposition or denudation which is taking place. Undue drainage from the organism, as during lactation, causes bone denudation, and it is possible that the action of the parathyroid principle is governed to some extent by the calcium concentration of the blood circulating in the bony tissues. When complete parathyroidectomy is carried out, denudation does not occur and the blood calcium falls. The work of Thomson and collaborators seems to show that the very high blood calcium in laying hens depends upon the presence in adequate amounts of the active principle of the parathyroid glands.

Parathyroid extracts have been prepared which do not change the blood calcium level, and which markedly retard growth. Similar extracts have been prepared by Thomson and Collip from other tissues, and the effect is not specific to the parathyroid glands or presumably concerned with their function.

Hypoparathyroidism is observed most frequently as a sequella following surgical interference in thyroidectomies. In such cases when latent tetany persists, or open manifestations occur, they can usually be controlled by the oral administration of calcium lactate, or of calcium lactate with cod liver oil, or by the injection of a potent parathyroid extract. Snapper states that a preparation known as "A. T. 10" is very valuable in the treatment of tetany, whether of parathyropivic or of idiopathic origin. This preparation is reported as a by-product from the irradiation of ergosterol which has been fractionated and freed from vitamin D. Parathyroidectomized dogs have been kept in normal condition for more than a year by this preparation.

Hyperparathyroidism may be differentiated into several different clinical types, which include (1) that rare condition known as generalized osteitis fibrosa ("von Reckling-hausen's disease of the bone"), in which skeletal symptoms predominate, decalcification, cysts, and tumors are found in the bones, and ultimately fractures take place; (2) the osteoporotic types, with generalized decalcification, but no cysts or bone tumors; and (3) hyperparathyroidism associated with kidney lesions. When the kidneys are involved, the first symptoms may be associated with renal stones of the calcium phosphate type. The calcium phosphate, on the other hand, may be slowly deposited from the kidney tubules in the parenchyma, and the concretions eventually lead to inflammatory changes, sclerosis, and contracted kidneys.

Up to the present there is no biological method of assay sufficiently precise to be generally acceptable. Various methods have been suggested based on the average increase produced by the parathyroid extract in the blood calcium of dogs or of cats; the increase in the urinary calcium of rats following the injection of the extracts; the measurement of calcium in the parotid saliva of dogs; and the protection against narcosis due to magnesium sulfate, conferred on white mice by the parathyroid extract.

TOOTH PASTE DEVELOPMENTS

By JOSEPH M. VALLANCE

(Concluded from August)

Flavors and Medicaments. Other materials incorporated in tooth pastes include flavoring oils, antiseptics, sweeteners, lubricants; and additional ingredients of a special character, such as those intended to remove tartar deposits.

In the matter of flavors it is rarely advisable to depart radically from the conventional idea of what a tooth paste flavor should be. Excellent flavors of lemon, pineapple and fresh-fruit types have all been tried out experimentally (to the writer's personal knowledge), but however good they have been it has always proven to be unwise to market them. The standard oils for tooth pastes comprise peppermint, spearmint, eucalyptus, cloves, cassia, anise, pimento, cardamom, geranium and rose. Miaouli oil from New Caledonia is another interesting flavor oil that somewhat resembles a combination of eucalyptus and peppermint but has also an attractive, characteristic note of its own. The chief synthetics and isolates for this purpose are methyl salicylate, menthol, thymol, eugenol, geraniol, anethol, musks, ionones and vanillin.

Sweetening agents may be selected from saccharin, honey, sugars and syrups; but saccharin is nowadays the most commonly employed. Tooth paste flavors should always be tested in the paste itself, by adding from 1 to 5 per cent. and leaving on the shelf to age. The flavors at various strengths should be compared at the end of the trial period, and the type and proportion of flavor to be used decided upon accordingly.

To prevent the paste from adhering to the inside of the collapsible tubes, the incorporation of about 1 per cent. of a high viscosity mineral oil in the formula is frequently found to be desirable. This more particularly applies to the soapless type of tooth paste.

The addition of antiseptic substances as such (and not merely incidentally, in the form of flavoring oils) is not a practice that can be recommended. Objections can be raised, on bacteriological grounds, to any substance that will radically alter the pH or reduce the harmless bacteria of the mouth—a fact that has been stressed from time to time by various workers, including S. P. Jannaway, C. I. B. Voge and, more recently, M. C. Crowley and U. G. Rickert (writing in the *Journal of Dental Research*, 1937, 16, 531, on the Disinfectant Values of Mouthwashes). In any case, it is absurd to ascribe disinfectant properties to a preparation that needs to be held in the mouth for as long as 10 minutes if any really effective result is to be obtained.

As a matter of interest, however, we may record that the following substances have been proposed during recent years as suitable antiseptics for incorporation in tooth pastes: isothymol, licinol, chloretone, chlorthymol, cresantols (R. W. coefficient 120; to be used 1 part in 1000 of the paste), ti-tree oil (for anti-pyorrhoea pastes) and the various esters of parahydroxybenzoic acid. Azochloramid and chloramine-T have been proposed for use in mouth washes.

Special Ingredients. The addition to tooth pastes of special ingredients such as tartar-removers, bleaches, acid-neutralizers and so forth has been the subject of much investigation and considerable advertising.

For the removal of tartar, the use of sulfonated oils and similar products has been rightly criticized by Dr. A. Lewinson, who suggests as alternatives certain acid adipates and sodium hexametaphosphate (calgon). The latter product has also been commended in this respect by J. Augustin and others—Augustin suggesting the use of 1 to 2 per cent. From personal experience of this metaphosphate, I should think it would prove an admirable addition, in small quantities, to many existing tooth paste formulas—owing to its ability to prevent lime soap formation and re-dissolve lime soaps with effervescence. Acidic pastes are also said to be effective

against "tartar", which incidentally consists of about 60 per cent. calcium phosphate, 10 per cent. calcium carbonate and about 25 per cent. organic matter.

The water soluble salts of the aminomethylene-carboxylic acids have been proposed in a patent as tartar combatting agents—mention also being made in the same patent of the utility of sodium metaphosphate as a solvent for tartar. In French Patent 803,161, one finds a reference to a buffer mixture of alkaline salts, which is prepared to dissolve the tartar and the salivary mucin, making the saliva alkaline. An example gives a mixture of 80 parts ammonium sesquicarbonate, 10 parts sodium carbonate and 10 parts sodium bicarbonate, which is added to the tooth paste or powder.

Considerations of space prevent a detailed investigation of other special ingredients for tooth pastes, but one may note in passing the use suggested by W. A. Poucher of not more than 2 per cent. pancreatin as a tartar-softener: the addition of 3 per cent. isoamyl acetate as a non-injurious bleach for stained teeth (G.P. 640, 129) the combination in pastes of sodium perborate and a refined edible oil such as olive or peanut (U.S.P. 2,090,437); and the use of so-called "tonic" ingredients, such as common salt, Epsom salts, mineral spring salts and so forth. Not without interest in this connection is the growing dislike in medical circles of perborate tooth pastes—a view that was upheld recently in the editorial columns of the *J.A.M.A.* Complaints have often been made of bleeding and irritation of the gums caused by the use of oxygen-evolving pastes.

Notes on Manufacturing. Manufacturing operations consist essentially of mixing, milling and filling—but many adjustments are frequently necessary before a given formula produces optimum results. A point that should always be followed is to incorporate salts in such a solution as will allow for cooling without crystallizing out; too frequently a hot solution is prepared and added to the mass, with the result that a proportion of crystals separates out after the paste has been allowed to stand. Soap should be added last, either as a fine powder or else as a gel; opinions seem to differ as to which gives the best results and, while theoretically the soap gel idea seems to be the soundest, I personally have always obtained more satisfactory results by adding the soap in powder form. This would therefore seem to be a case for individual experiment.

All tooth pastes should finally be tested by refrigeration, and subjection to heat—the highest temperature ordinarily necessary being from 100° to 115° F. If the creamy, uniform consistency of the paste breaks down under such tests—attention must be given to matters of viscosity, mucilage strength, proportion of soap or other emulsifiers or binders used, compatibility of the various constituents, etc. It is also advisable to determine the pH values of tooth pastes and compare them with those of leading brands on the market. In this latter connection it is worth noting that the U. S. Bureau of Standards requires the pH value of a 25 per cent. by weight solution of a tooth paste to be greater than 4.9 and less than 10.1.

Therapeutic Venoms

(*Continued from page 289*)

coagulate blood are the venoms of the tiger snake, black snake, fer-de-lance and the Daboia of the viper family.

In England, Barnett,[16] has found many hemostatic uses for Russell's viper venom. This is effective in even very high dilutions, 1:10,000. No toxic effects, it is stated, were attributable to the venom. Now and then mechanical difficulty was encountered in getting the venom to the bleeding point. It is this inability to obtain contact that is frequently the cause of failure to stop the blood flow.

Among the many conditions treated with coagulant venoms are cases of thrombocytopenia, (decrease in number of blood platelets), hereditary telangiectasis, (dilation of capillaries and minute arteries) a disease where nasal hemorrhage is a frequent symptom, prolonged jaundice and, of course, hemophelia. In general surgery, too, these venoms have found valued uses, particularly for oozing wounds. The greatest use for these coagulant venoms, however, is in dental practice. Here, the toxin solutions have proven to be particularly effective hemostats for controlling hemorrhages following tooth extractions.

Venoms that are administered by hypodermic injection have likewise proven to be of great therapeutic value. Peck and his associates[17] have used moccasin venom injections as a diagnostic, prognostic and therapeutic agent in purpura hemorrhagica. This disease is characterized by a marked bleeding tendency due to changes in the blood clotting factors and probably in the blood vessel walls. The studies of these workers convinces them that the efficacy of moccasin venom injections in this condition is due to the strengthening action on the vessel walls. The drug is said to make the walls resistant to hemorrhage. The Peck test[18] for determining capillary fragility employs intracutaneous injections of moccasin venom solutions.

Davin and his coworkers[19] have used subcutaneous injections of moccasin venom solutions to shorten puerperal (childbirth) and post partum bleeding. Goldberger and Peck[20] used a similar moccasin toxin solution in a similar manner, in the treatment of functional uterine bleeding. It appears to be of little value in uterine bleeding due to fibroid tumors. Watkins[21] has employed moccasin venom to check menorrhagia (immoderable flow during menstruation) in cases not due to organic lesions. In all of these applications, it is emphasized that dosages depend upon the observed symptoms. Solutions should not be more than a year old, if they are expected to exert any therapeutic activity.

Injections of this snake venom have produced striking results in several cases of recurrent nasal hemorrhages. In some patients bleeding stopped after a few treatments, in others longer medication was needed.[22] After all other methods had failed, Watkins and Thompson,[23] tried moccasin venom injections, with success in the treatment of essential hematuria (blood in the urine).

The venom worked even in a case which had persisted for 16 years, cure being affected in two weeks. A similar treatment has proven successful in the therapy of gastrorrhagia, which is characterized by bleeding from the stomach.

A new and unusual use of snake venom is suggested by work done by Mechner of Vienna.[24] He employed a snake poison salve, to be rubbed into the arm, for the relief of the common cold. He reports excellent results from the inunction of this salve in the treatment of acute coryza, and vasomotor rhinitis (hay fever).

Mention should be made of another important group of snake-derived preparations, namely, the antivenins or anti-venom serums. These are particularly important in emergencies caused by snake bites, to counteract the deadly poisons. Snake antivenins which are marketed, are either monovalent or polyvalent. The former type is of value only for the specific venom used for its production. The latter type is employed for counteracting the toxins of several species of poisonous snakes belonging to the same family.[2] This is an extensive subject, however, and more space cannot be indulged here.

The snake venoms when properly prepared and skillfully and correctly administered promise to be potent therapeutic agents. Continued study is constantly widening the scope of their usefulness, but because these drugs are also dangerous poisons, caution must, in all instances, be a paramount consideration. As Kellaway[3] says, "It should be borne in mind that snake venoms are not harmless remedies and that our knowledge of their constitution is insufficient to justify the use of such complex mixtures without good evidence of their therapeutic value."

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Drug Law Progress

(Continued from page 281)

cology of dyes. The cosmetic industry has, therefore, been asked to determine what dyes are absolutely necessary. A reduction of the number and variety of dyes, Mr. Campbell believes, would be to the advantage of the government and the industry.

He proposes to make a superficial investigation to determine, if possible, those dyes actually toxic and then to set up a tentative list of them which would be forbidden. The next step would be certification of samples of each batch issuing from the factory showing that in their production they have been sufficiently refined to eliminate impurities that may be responsible for poisonous qualities. For the present, this pioneering work in the cosmetic and dye field will be carried on in Washington. Later it may be extended to the field or district offices of FDA in other parts of the country.

Mr. Campbell does not seem to be disturbed by the job confronting his group in dealing with certain other questions arising under the new law. It appears from information gathered from various sources that the Secretary of Agriculture will not pass judgment on the newness of drugs. That will be up to the manufacturer, it is said. If that is the case, the department won't know whether a drug is new or not, except as indicated in applications it receives and in the definition prescribed in the new regulation under Section 201 stating why and when a drug may be new by reason of the newness of an ingredient, combination, usage, proportion, or dosage, duration of administration, etc.

Mr. Campbell made it clear to DRUG AND COSMETIC INDUSTRY that the problem of allergy does not arise in determining the safety of a drug. He pointed out that a drug might be safe to 999 persons but that the thousandth person might be allergical to it. Under such circumstances he indicated the drug would not be held to be unsafe. The new law takes account of problems of allergy, it is stated.

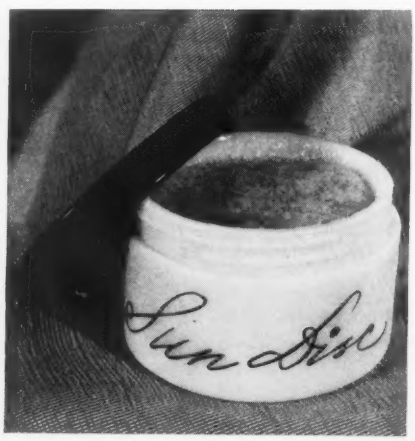
One of the problems arising in the administration of the new law concerns the matter of "material" time and "material" extent with reference to usage and demonstration of safety of a new drug. Discussing this phase of the law in administration, Mr. Campbell said:

"A new drug is not generally recognized as safe. It can acquire recognition by use over a period of time. It is provided that experimental work shall not be regarded as recognition referred to in the law. There are two ways by which recognition of safety can be made or obtained. First, by long general use and, second, by such protracted and thorough investigation on the part of experts as to have completely exhausted any possibility of a drug being otherwise than safe. So far as the latter basis of determining safety is concerned, Congress said that it must go on for a material time. What would be material time would depend largely upon the product, the possibility of its being unsafe in various ways after adequate determination of that fact by investigators. Whether or not so many weeks or months would be sufficient will depend upon quick and simple facilities as are practicable for testing and whether tests are carried on sufficiently to satisfy experts on that score."

COSMETIC

ONE of the bright spots of the summer season was the successful merchandising of cosmetic pads—a comparatively recent novelty in the cosmetic field. It has been estimated that in the neighborhood of a quarter of a million dollars worth of these pads will be sold this year and the largest share of that business was done in the late spring and summer months. As this coincided with what was generally speaking a comparatively low level of cosmetic sales generally, they afforded a welcome promotion item to many toilet goods counters throughout the country.

By this time the array of cosmetics which have been marketed in pad form furnishes quite an imposing array. Cleansing pads, nail polish remover pads, deodorant and anti-perspirant pads, sun preventive pads, eye lotion pads, and, most recently, eau de Cologne pads, have been among those which have made their appearance. And as Coolies, Quickies, Tannies and Qu-Tees, to mention just a few, they have been taken up by the consumers in millions. During a promotion



PADS

in one of the New York stores the salesgirls were complaining of writers' cramps from making out sales tickets for these pads. This was the same store which did over $15,000 worth of business on pads within a few months.

Although it is of no interest but a historic one, there has been considerable curiosity expressed as to who originated the idea of cosmetic pads. As this is invariably a swell way to start a fight, the issue will not be met squarely here. But an examination of back issues of THE DRUG AND COSMETIC INDUSTRY discloses the interesting fact that the first pads to appear in these pages was in the issue of November, 1936, when the cleansing pads of de Muir Products Laboratories of Boston, were described and illustrated. It was almost a year, in September, 1937, to be exact, that the next pads were described here and new ones continued to appear in quick succession from then on. Although New England was first represented here, most of the succeeding pads originated in the middle west and it was there that the largest share of the business was first done. It is there too, that the most successful marketers of cosmetic pads are located.

As is to be expected, the biggest volume by far has been done on the cleansing pads, but the deodorant pads which were marketed during the past season went very well and seem to have a considerable appeal from the point of view of convenience in application. Most of the pads and notably the most successful ones, have been marketed as specialties and thus far, only the nail polish remover pads have been made part of established lines. This type of marketing is obviously best adapted for this period of exploitation which bids fair to continue with increasing volume for some time to come for no one believes that the peak sale is yet in sight.

ABSORPTION BASES

Absorption bases, or lanolin absorption bases, were probably developed to overcome some of the shortcomings, primarily based on their non-uniformity, of natural emulsifiers. Some work was also done, during the last war, when American lanolin was not available in quantity to meet demand, to produce emulsifiers suitable for cosmetic and pharmaceutical use. Modern absorption bases, however, far surpass these crude early products in their effectiveness.

As far as we know, absorption bases now in use are made by treating selected fractions of lanolin in such a way as to increase emulsifying power. These active parts are then mixed with viscous substances to make the finished base. The emulsifier itself is generally blended from more than one batch in order to assure the complete uniformity of the absorption base.

Additional claims made for absorption bases generally depend upon their cholesterol content, which is said to be nearer that of the human skin, in amount and type of combination, than the original natural product.

Two broad types are available: the hard and the soft. The latter is very soft, practically semi-liquid, stringy, and often has a distinct odor. The first is very similar in appearance and general physical properties to a short-fibered petrolatum. Both take up water and hold it firmly in the form of a white water-in-oil emulsion.

They will be considered separately as regards their behavior with water, mineral oil, petrolatum, and paraffin.

The soft absorption base used in this investigation is yellow-brown, semi-liquid, stringy. Two parts of the base emulsified with one part of water gave a semi-liquid water-in-oil emulsion that was almost white and quite stringy. A whiter product resulted from equal parts of the base and water, while the whitest, least stringy and least sticky emulsion was made with two parts of water and one of the base. Increased amounts of water made a firmer mixture.

The base is affected adversely by the presence of relatively large amounts of mineral oil. Seven mixtures were made in the following proportions, the first numeral referring to the base, the second to low viscosity mineral oil, and the third to water: 1-1-1; 1-1-2; 1-2-1; 1-2-2; 2-2-1; 2-1-1; 2-1-2. The first five of these, in which the amount of mineral oil present was equal to or twice as great as that of the base, separated into two layers, the upper consisting of clear yellow oil, the lower being a water-in-oil liquid emulsion. The 2-1-1 and 2-1-2 combinations show very little oil separation and are liquid emulsions. There is some indication that as the amount of water in these combinations increases, the ability to hold oil becomes better.

The story is somewhat modified with petrolatum replacing the mineral oil. Incidentally, only one type of petrolatum was used and somewhat different results may be obtained with petrolatum from a different source. The same series of seven was made as in the preceding case, with petrolatum in place of mineral oil. With base and petrolatum in equal quantities, the addition of water produced soft, stringy emulsions. Slight oil leakage was exhibited by the 1-1-1 mixture. The 1-1-2 mixture, however, was pure white and a little harder, but still somewhat stringy, and held the oil without releasing it. The 1-2-1 and 1-2-2 mixtures were white, consistent, lustrous creams. Of the mixtures containing twice as much base as petrolatum, the one with more water was the whiter and showed less oil leakage. The 2-2-1 mixture contained insufficient water so that

By JOSEPH KALISH and HAROLD ABRAMS

it was somewhat salve-like in character and showed some oil leakage.

The only apparent effect of paraffin (123/125° F.) was to make mixtures of base and water somewhat harder. In some cases the emulsions were quite hard but immediately became soft when applied to the skin and could easily be spread.

In some details the harder type of absorption base behaved differently. The addition of water alone results in an emulsion that is hard, white and lustrous. In fact, the product is so white that it might easily be confused with a beeswax-borax cold cream and also spreads as easily on the skin as the older type. Samples made according to the customary scheme, namely, 2-1, 1-1, and 1-2, the first figure referring to proportion of base, the second to water, exhibited slight leakage of oil on standing for two months which included a record-breaking hot spell.

It is very difficult to make a stable, consistent cream consisting only of a hard absorption base, water, and a large amount of mineral oil. In the customary series of seven chosen to show the possibilities of all types of combinations, only the pair containing twice as much base as oil were consistent enough to be considered creams. The 2-1-1 mixture was a soft spongy cream which exhibited some leakage of oil while the test batch with twice this proportion of water, 2-1-2, was much smoother but still leaked oil. The others all showed a clear yellow upper layer of oil. Three mixtures, 1-1-2, 1-2-1, and 1-2-2, broke down completely into a clear upper layer of oil, an intermediate cloudy layer, and a lower clear layer of water. The remaining tests showed only two layers, upper clear oil and lower liquid water-in-oil emulsion.

Again, the use of petrolatum instead of mineral oil led to better emulsions. Equal parts of petrolatum and base produced emulsions that eventually liberated some water. The 1-2-2 mixture also liberated a little water, but all the other mixtures held water quite well. The 1-2-1 combination resulted in an emulsion of fine consistency and color that rubbed out well on the skin and was entirely free from stickiness. None of the products was stringy. Here again paraffin merely gave harder emulsions that rubbed out well on the skin (base, paraffin, water, only) without essential modifications of other properties.

We conclude, then, that absorption bases in their original state have very high water absorbing power and can produce very satisfactory cosmetic and pharmaceutical emulsions. These basic emulsions, however, must be treated with respect and modified cautiously. Too much oil has a deleterious effect. Experiments made with the formulas offered by the manufacturers resulted in uniformly fine emulsions.

Like all raw materials in this industry, and in the manufacture of all colloidal products, good results cannot be obtained with haphazard manufacture and formulation. Stay with the suggestions of the manufacturer until you know his product as well as he does and then test all proposed modifications exhaustively. No water-in-oil emulsion we have seen exceeds the brilliant whiteness and texture of well made absorption base products but the emphasis must always be placed upon care in manufacture and formulation. Finally, the use of absorption bases in small amounts to modify conventional creams is well-established and often gives results obtainable in no other way.

U.S.P. VITAMINS

DR. E. Fullerton Cook, Chairman of the U.S.P. Revision Committee, reported on U.S.P. progress to the A. Ph A. meeting recently held. Dr. Cook said in part:

At the recent U.S.P. Vitamin conference conducted by the Advisory Board, 85 representatives were present and it is believed that the recommendations resulting from this conference will place vitamin A and vitamin D preparations upon an entirely new and scientific basis, resulting in a clarification of the now complex situation. The recommendations are as follows:

U.S.P. Cod Liver Oil—Cod Liver Oil (Oleum Morrhuae) is to be retained as now official except that the minimum vitamin A potency be raised to 850 U.S.P. units per Gm. This is the present N.N.R. minimum requirement, and is assumed to represent a natural oil of excellent quality which can readily be obtained, without manipulation, in practically every producing field.

This also establishes a ratio of 10 vitamin A units to each vitamin D unit which represents about the proportion found in natural Cod Liver Oil.

It has also been generally agreed that the average satisfactory dose of such an oil for either children or adults is "2 teaspoonfuls per day," which is the present U.S.P. average dose.

New Vitamin A and D Products—It is then proposed that a series of scientifically manufactured products, containing vitamin A and D, be given official recognition as follows:

1. Under the title "*Vitamins A and D in Oil*" it is proposed to recognize a solution in oil of vitamin A and vitamin D concentrates from natural oils, the product to contain "at least 1000 U.S.P. units of vitamin A and at least 100 U.S.P. units of vitamin D, in each Gm." (This preparation is not to be made from vitamin A or vitamin D of synthetic origin. If such products are recognized they should be differently named, and constitute a different product). It is proposed that the carrying oil in this preparation may be a natural fish oil like "Cod Liver Oil" or it may be a bland oil such as Corn Oil or Cotton Seed Oil. It would be especially desirable to use an oil containing natural antioxidants to aid in preventing deterioration in vitamin content.

This preparation could thus be made a product, presumably having all of the therapeutic value of Cod Liver Oil, without its objectionable odor and taste. The use of a flavor might even be permitted as is now done for Emulsion of Cod Liver Oil. The average dose would be two teaspoonfuls per day for either children or adults.

2. A second similar product, but with ten times the potency, is also proposed under the title "*Vitamin A and D in Oil-10.*" This would contain at least 10,000 units of vitamin A and at least 1000 units of vitamin D per Gm. The average dose would be two 5 minim capsules per day.

3. A third similar preparation is proposed. This would be known as "*Vitamin A and D in Oil-50*" and contain at least 50,000 units of vitamin A and 5000 units of vitamin D per Gm. The average dose would be 6 drops per day.

4. Another product would be known as "*Vitamin A in Oil*" and, being made from a concentrate from natural oils, it would contain a trace of vitamin D but no claims would be allowed or required for its vitamin D potency. It would contain "at least 50,000 units of vitamin A per Gm. and would provide a suitable form for the administration of vitamin A when vitamin D is contraindicated.

5. In similar manner a vitamin D containing oil would be provided to be titled "*Vitamin D in Oil*" and to contain at least 10,000 units of vitamin D per Gm. The therapeutic use of preparations containing this strength of vitamin D is well established.

6. Finally, still another vitamin A and D product to receive official recognition is proposed, namely a "*Vitamin A and Vitamin D in Oil for Veterinary Use.*" This would be required to contain at least 1000 units of vitamin A and at least 100 units of vitamin D, but permission would be given to use natural oils darker in color and more adorous than would pass as an official "Cod Liver Oil." Also, no reference would be made to the variety of fish from which the oil was obtained. This would relieve an existing situation which has become increasingly difficult, especially with reference to importation as there is available a large supply of oils of excellent vitamin A and D potency, suitable for use in animal treatment but dark in color and often with more odor than could be accepted for human use. By the official recognition of such an oil, specifically for veterinary purposes, such an oil can be imported and the cost of vitamin therapy for animals notably reduced.

It is important to observe that all action by these auxiliary boards is submitted to the Committee of Revision for approval before it becomes a part of the official text.

The F.D.A. and A.M.A.

(*Continued from page 283*)

A.M.A., and the marked trend toward social legislation of all sorts make the position of the A.M.A. much less secure than was formerly the case.

Many manufacturers are of the opinion that the new law is going to work unnecessary hardships upon them. But when they see how the law functions and how it places all the responsibility in one government department where it belongs, they might change their minds. Certainly it is far better for those manufacturers who are sincere, to have a government department with sufficient power to keep the business clean, than it is to have a lot of self-constituted organizations trying to rule different groups of manufacturers and products in a manner which is little better than a racket.

RESEARCH IN PHARMACY

Being selected abstracts of papers presented at the A. Ph. A. meeting.

Hydrogenated Castor Oil in Ointments. Part III. Product of Sulfonation, by George W. Fiero.

Sulfonated hydrogenated castor oil was found to be superior to sulfonated castor oil as an emulsifying agent, both for liquid emulsions and cosmetics, and as a detergent. It is solid, soluble in hot water and alcohol, and forms a collodial solution with liquid petrolatum which solidifies to a gel upon cooling.

Cuticolor Lotion, Cream, Paste and Ointment, by Bernard Fantus and H. A. Dyniewicz.

The popularity of the Calamine Lotion is probably due to its skin color; hence, experiments were undertaken to determine whether the Calamine preparations now official in the National Formulary, the lotion, liniment and ointment, might be susceptible of improvement in the way of making them more truly skin color and adding to them cosmetic qualities, which they now do not possess. A formula for an *improved Calamine Lotion* is offered, which does not sediment, is more nearly skin-colored, and has a pleasant flavor. Similar improvements are suggested for Calamine Liniment, which, it is believed, should be given the title "*Cuticolor Cream*" to distinguish it from the true liniments.

A formula for "*Cuticolor Paste*" is also offered in which the gelatinizing power of Bentonite is employed to develop the paste-like consistency. *Cuticolor Ointment*, which is believed to be an improvement over the Calamine Ointment of the N. F. has been found to be quite efficient as a protectant against ultraviolet rays. *Cuticolor Powder*, it might be noted incidentally, is now in extensive cosmetic use under the name of face powder. A formula for a skin-colored powder is, however, offered that might serve as a vehicle for other medicines and as the bases for the various cuticolor preparations. Formulas for "*Cuticolor Tragacanth Varnish*" and "*Cuticolor Gelating Varnish*" are also offered, the latter as an improvement over the white preparation now employed as "Unna's Boot" in the treatment of dermatitis due to varicose veins.

We also present formula for "*Cuticolor Cream Salve*" that might serve as a useful covering for objectionable skin blemishes.

Reduction of Alkalinity of Hypochlorite Solutions with Sodium Bicarbonate, by Arthur Osol and John Roger Cox.

In the preparation of diluted solution of sodium hypochlorite from the stronger official solution, the alkalinity of the latter is decreased by adding sodium bicarbonate. At least two writers explain the mechanism of this reaction as consisting of the repression of ionization of sodium hydroxide by the common sodium ion. As other sodium salts do not have the same effect this cannot be the explanation.

This paper reports the pH values of solutions containing sodium hydroxide and sodium bicarbonate and shows a comparison with corresponding values for sodium carbonate solution, with and without bicarbonate. From these data it is concluded that the reaction referred to above is as follows:

$$\overline{OH} + H\overline{CO}_3 \rightarrow \overline{\overline{CO}}_3 + H_2O$$

with the equilibrium displaced to the right sufficiently to reduce hydrolysis below the point where a red coloration is obtained with phenolphthalein powder.

Mastic in Preparation of Enteric Medicaments, by F. S. Bukey and C. J. Klemme.

In this study a determination, using radiographic methods, was made of the efficiency of mastic-talc and mastic-magnesium stearate as enteric coating materials. In brief, the technic consisted of preparing pills of barium sulfate, coating them with the combination of mastic and then giving them to subjects who were in turn radiographed at desired intervals until disintegration of the pills was noted. Duplicate experiments were

conducted on fifty different subjects for both types of coating or a total of 200 experiments. These individuals ingested 400 pills and in making the study, 936 radiographs were taken.

It was found that the efficiency of the mastic-talc coating was 48.5 per cent. as compared to 62.5 per cent. for the mastic-magnesium stearate. Both of these combinations were easily applied by the use of a coating pan.

The higher boiling solvents such as methyl propyl ketone when used to dissolve the mastic, produced a much better coating than the more volatile compounds such as, acetone and ether which produced blisters in the coating on evaporation.

It is believed that in testing the efficiency of a new enteric coating that one hundred subjects should be used. However, a smaller number may be used for control work if the efficiency value has previously been determined.

In reporting enteric efficiency only those pills, tablets, or capsules disintegrating in the small intestine or ascending colon should be considered, since, it is believed that absorption from the transverse and descending colon is not complete.

Texas Cedar Wood Oil, by Nevada Windemuth and Edward Kremers.

The distillation of the wood of Juniperus mexicana L. in Austin, Texas, was brought to the attention of the writers by Professor C. C. Alpers, who secured the materials for this investigation. The rectification of the crude oil yielded a by-product which remained in the still. This proved to be cedrol. More of this sesquiterpene alcohol was found in the rectified oil, which consists largely of cedrene.

The Chemical Examination of the Bark Oil of Abies Amabalis, The Chemical Examination of the Leaf Oil of Abies Amabalis, The Chemical Examination of the Bark Oil of Abies Grandis, by Malcolm S. Trupp and Louis Fischer.

The physical and chemical characteristics were determined for the essential oils obtained from the leaves and bark of Abies amabalis and the bark of Abies grandis.

The physical constants, (specific gravity, specific rotation, refractive index) in addition to the saponification value, acid number, ester value, and saponification number after acetylization, were ascertained for each individual oil. Subsequent to the removal of free acids, phenols, and aldehydes, each oil was subjected to distillation under reduced pressure and divided into its various fractions. The physical constants of each fraction were determined prior to identification.

Traces of free acids, phenols, and aldehydes were found to be present in the oils although none could be satisfactorily identified. Alpha-pinene represented a large portion of each oil along with varying amounts of Beta-phellandrene. In addition to the above constituents, the oil from the bark of Abies grandis was composed of measurable quantities of 1-camphene, bornyl acetate, and 1-cadinene.

Cholestrol in Ointments, by Ping-lu Li and Rudolph A. Kuever.

A glass-capillary 10 cm. in length, 1 mm. internal diameter with an enlarged end 2 mm. internal diameter and 3 mm. in length was used for determining the melting point of ointment bases.

The new ointment is composed of 98 per cent. of white petrolatum and 2 per cent. of cholesterol.

Ammoniated Mercury Ointment was made by both the U.S.P.XI and the new wet process. Ointment of Phenylmercuric Nitrate, 1:1500, was made with white petrolatum, and another with the new ointment base.

The antiseptic potency of the four ointments was determined by the modified Reddish Agar-cup and Agar-plate Methods, using Bacillus subtilis and Staphylococcus aureus as test organisms.

The mercury coefficients obtained from the data led to the following summary and conclusions:

(1) that Ammoniated Mercury Ointment made by the wet process, with the new cholesterol base, has a higher antiseptic potency than that made by the U.S.P.XI method.

(2) that Phenylmercuric Nitrate Ointment made with an aqueous solution of the salt, in a base containing cholesterol, possessed distinctly higher antiseptic potency.

(3) that with the new base ointments can be made containing large quantities of water, making an emulsion having an aqueous inner phase and oleaginous outer phase.

Decomposition of Citric Acid by Ferric Iron, by S. I. Peltz and E. V. Lynn.

The decomposition of citric acid in the presence of ferric iron and sunlight was formulated by Burt in 1928, but we find evidence that this conception is wrong. When ferric hydroxide and a solution of citric acid are exposed to light, part of the acid is oxidized to carbon dioxide and the iron is reduced to a soluble ferrous salt, presumably the citrate. Neither acetone nor formaldehyde could be found. Alkali citrates under the same conditions dissolve the iron without giving carbon dioxide or any ferrous salt.

Isolation and Identification of Coptine, by Tom D. Rowe.

Quantitative determinations, qualitative tests and microscopic studies were made on the ether soluble portion of the roots and rhizomes of Coptis accidentalis.

Coptis occidentalis is a small plant growing abundantly in the high, damp sections of western Montana, and is a close relative of Coptis trifolia which was official in N.F.V.

Tests showed the ether soluble material to be alkaloidal. The roots and rhizomes contained 0.18% of ether soluble alkaloid identified as coptine.

The alkaloid was shown to produce a marked purple fluorescence in ethereal solution which disappeared when the solution was made acid and the free alkaloid converted into a salt.

The hydrochloride and hydrobromide of Coptine were formed but attempts to form the hydrobromide were unsuccessful.

Microscopic examinations were made of the free alkaloid dissolved in 2% sulfuric acid. Different reagents were added to separate portions of the acid solution containing the alkaloid. Acid water without alkaloid was mixed with the reagents as controls. Of the reagents used on the alkaloid 1% picric acid solution produced crystals which were characteristic of Coptine alone. The picric acid solution was added to separate portions of Hydrastine and Berberbine dissolved in 2% sulfuric acid. The crystals obtained were distinctly different than those obtained with Coptine. These comparisons along with differences in spot plate tests completely distinguished Coptine from Hydrastine and Berberine. Reference has been made to the effect that Coptine and Hydrastine are one and the same alkaloid, but from this study it would seem that such a statement is false.

Effect of Pressure and Vacuum on Efficiency of Extraction, by William J. Husa and George R. Jones.

A review of the literature indicates that pressure and vacuum have been used in various ways in drug extraction for more than 120 years. Various writers have presumed that vacuum maceration increases the penetration of menstruum into the drug. Quantitative data are presented on the effect of vacuum maceration on the imbibition and extraction of belladonna root in a maceration process.

Effect of Vacuum on the Percolation of Belladonna Root, by William J. Husa and George R. Jones.

Vacuum maceration preparatory to percolation has been advocated from time to time for many years but suprisingly little exact data has been published on vacuum processes as compared with ordinary percolation. Such data are presented in this paper. Details are also given for an ordinary percolation process by which full strength fluid extract of belladonna root has been made without collection of weak percolate.

Effect of Vacuum in the Extraction of Cinchona, by William J. Husa and George R. Jones.

Data are presented regarding the effect of vacuum maceration on the efficiency of extraction of cinchona by maceration and percolation processes.

Natural and Artificial Calamine from the Pharmaceutical, Chemical, and Pharmacological Standpoint, by Helen L. Creech and C. O. Lee.

This study was made in an attempt to answer the question as to whether prepared calamine, so widely used, had medicinal merit which zinc oxide did not possess. Natural calamine, too, was studied along with the two preparations just named.

The history and literature of calamine have been brought together. Chemical analyses of natural calamine have been made. Pharmacological and bacteriological tests have been carried out in an effort to discover any medicinal and antiseptic differences in these preparations.

Microscopy of Waxes and Wax Constituents, by Harry Taub and Samuel Zweig.

Wax crystals are obtained by dissolving the wax in a suitable solvent at the solution temperature of the wax in question and allowing to cool spontaneously to room temperature. Although the waxes represent mixtures of several constituents, yet each wax will tend to produce just one or at most two types of crystal formations. Monoamylamine, due to its dual nature of solvent and chemical reagent was found very suitable as the wax solvent. n-Butyl alcohol was also used. Some typical crystal formations were obtained with Beeswax, Carnauba wax, Candelilla wax, Ozokerite and Montan wax, when monoamylamine was used as the reagent. In mixtures of waxes some idea of the main constituents present may be obtained from the appearance of the crystal formations. The microscopic appearance of some wax alcohols and fatty acid derivatives has been investigated. An odd type of crystal formation was obtained when potassium stearate was prepared and crystallized by a special method from n-Butyl alcohol. Several photomicrographs accompany the paper.

Mold Contaminants of Some Common Chemical Compounds and Simple Solutions, by Fanchon Hart.

Who has not been annoyed and astonished by the appearance of that fluffy little ball, gelatinous mass or fluccolent precipitate? Any of these forms may appear and return time and again in the stock bottle containing a chemical reagent, sugar solution or galenical. A desire to identify these tenacious members of the plant kingdom, that not only live but thrive on the many corrosive poisons and alkaloids in the laboratory, has been instrumental in the development of this paper.

A Method for Color Evaluation, by L. K. Darbaker.

The work the N. F. Color Committee has been doing upon the evaluation of colors, has prompted the assembling of a mechanical means for this evaluation without the personal equasion entering into the analysis.

This machine consists of two special self generating photo electric cells wired through a potentiometer and connected to a sensitive double galvanometer.

The source of light is reflected from a 100 watt gas filled tungsten bulb.

The machine is operated by first balancing the photo electric cells, then inserting under one cell the standard color chart and under the other cell the powdered drug to be evaluated.

If the drug is of the same color tint as the standard, the galvanometer hand will point to zero, should the color be stronger than the standard, the hand will indicate the degree of stronger intensity on the scale to the left, but if weaker the hand will point to the right.

By charting the various stronger or weaker tints, the proper color chart is placed under the one cell to balance the circuit and thus obtain the color name.

Salts of Triethanolamine—Part II. Detergency, by George W. Fiero.

The relative detergency of solutions of salts of triethanolamine is reported. An apparatus for determining the extent of soil utilizing light reflected upon a photoelectric cell is described.

Mercuration of Substituted Derivatives of Thymol. I. Nitrosothymol Derivatives, by A. Wayne Ruddy and Joseph B. Burt.

Six-Nitrosothymol was mercurated by means of mercuri acetate in alcoholic solution, yielding 2-acetoxymercuri-6-nitrosothymol. The latter was used in turn to prepare 2-chlormercuri-6-nitrosothymol, 2-brommercuri-6-nitrosothymol, and thymol-2-(hydroxymercuri)-6-nitroso-oxide. Sodium-2-hydroxymercuri-6-isonitrosothymoquinone was obtained from the oxide by the action of sodium hydroxide. The position of the mercury group was proved by replacement of mercury with iodine and identification of the derivative as 2-iodo-6-nitroso-thymol. No evidence of dimercuration was obtained in any of these reactions. Several attempts to introduce mercury into the nucleus of 5-nitrosocarvacrol were unsuccessful.

Mercuration of Substituted Derivatives of Thymol. II. Chlorthymol Derivatives, by A. Wayne Ruddy and Joseph B. Burt.

Six-Chlorthymol was mercurated to yield 2-acetoxymercuri-6-chlorthymol. This compound yielded in turn 2-chlormercuri-6-chlorthymol, 2-brommercuri-6-chlorthymol, and thymol-2-(hydroxymercuri)-6-chloroxide. The oxide yielded sodium-2-hydroxymercuri-6-chlorthymolate. The position of the mercury group in each of these compounds was proved by replacing the mercury group with iodine and oxidizing the resulting product to 2-iodothymoquinone. The latter in turn was used to obtain 2-iodo-6-isonitrosothymoquinone. No evidence of dimercuration was obtained in any of these reactions.

Emodin from Chrysarobin, by John H. Gardner.

It has been found that emodin can be prepared fairly readily from chrysarobin by the following general procedure:

Chrysarobin is reduced to convert dianthrones into anthrones. The product is boiled under reflux with hydrobromic acid to demethylate emodin-mono-methyl ether anthrone. This material is then acetylated and the acetylated product divided into two fractions by crystallization. The more soluble fraction contains tetracetylemodin-anthranol. This is oxidized to triacetylemodin and that, in turn, saponified. Emodin is then extracted from the product with sodium carbonate solution and precipitated from the extract with hydrochloric acid.

Ampul Glass: Chemistry and Pharmacology, by R. K. Snyder.

The literature on the history and composition of ampuls is reviewed and discussed. The nature of the attack of water on glass and methods for determining the resistance of glass to this attack are described as well as results obtained by applying them to various kinds of glass containers. These methods are based upon the compounds dissolved from the glass. Estimations of the alkalinity yielded, form the basis of some, while determinations of the electro-conductivity and total residue provide for the remainder. The chemical composition, characteristics and methods used are mentioned and it is shown that the predominating compound is sodium silicate.

The literature on the pharmacological action of sodium silicate and colloidal silica is reviewed and discussed. Experimental work on yeast, daphnia, goldfish, rats, rabbits and dogs is described and the conclusions given. The results from these indicate that a 1% solution is required before toxicity is readily noted in the case of mammals. A series of clinical experiments involving intravenous saline solutions containing small amounts of sodium silicate and colloidal silica obtained from sterilization in soft glass containers, indicate that in these concentrations they have no pharmacological significance.

National Formulary Drugs. I. Lappa, by Heber W. Youngken and Raymond W. Vander Wyk.

An investigation of authentic drug materials collected directly from nature as well as of the crude drugs as now occurring in American commerce for the purpose of improving, if possible, the National Formulary VI monograph of Lappa.

Lappa. The percentage of extractive soluble in 95% alcohol of first year Burdock root was found to be 8.6 as compared with 2.71% yielded by the second year root. It is recommended that the restriction of the drug to roots of first year plants be retained.

The gross structure and histology of first and second year roots are discussed. The presence of a greater area of parenchyma containing more resin cells and inulin in the first year root than in that from second year plants was noted. The average percentage of attached leaf bases, as determined on 5 samples of commercial drug was 3.18. The acid-insoluble ash on freshly gathered, cleaned and dried root was from 0.28 to 0.33% whereas that from 5 different lots of commercial drug ranged from 0.93 to 3.89%, the average for the commercial drug being 2.93%. It is suggested that the percentage of attached leaf bases in the purity rubric paragraph be reduced from 5 to 4 per cent. and that the acid-insoluble ash be raised to not more than 3 per cent.

The first year root of Burdock can be distinguished from root of second year growth by the absence of characteristic wood fibers excepting in the crown portion of the former and their presence throughout the latter. The inulin in both roots occurred in the parenchymatous regions in the form of masses of irregular angular crystals from 7 to 10 microns in diameter.

National Formulary Drugs. II. Convalleria, by Heber W. Youngken and Raymond W. Vander Wyk.

An investigation of authentic drug materials collected directly from nature as well as of the crude drugs as now occurring in American commerce for the purpose of

improving, if possible, the National Formulary VI monographs of Convallaria.

Convallaria. Pharmacognostic studies were made on 5 commercial samples obtained from scattered sections of the U.S.A. and upon authentic rhizomes and roots of *Convallaria majalis.* It was ascertained that from 3 to 9 roots, root remnants or root scars are present on each rhizome node, and that these may occur on all surfaces of the noded, that the rhizomes are not only horizontal as heretofore stated but also oblique, that the endodermis of the rhizome consists usually of 2 layers, occasionally of 1 to 3 layers of endodermal cells, the radial and inner walls of which are more thickened than the outer walls and lignified, whereas the endodermis of the root possesses cells whose radial and inner walls are only slightly more thickened than the outer walls with Casparian spots on the radial walls. Reticulate trachea as well as the spiral and scalariform types (mentioned in the N.F. VI) were found, as were also fiber tracheids with slightly lignified walls and oblique pores, here reported in Convallaria for the first time.

The foreign matter in the commercial drug samples examined consisted chiefly of Polytrichum species and varied from 3.84 to 6.81%. The acid-insoluble ash in 4 samples varied from 2.21 to 6.008%.

It is suggested, since Convallaria Flores is no longer official, and since the drug represents rhizome as well as root, that the official title be changed from "Convallaria Radix" to Convallaria.

National Formulary Drugs. III. Stillingia, by Heber W. Youngken and Raymond W. Vander Wyk.

An investigation of authentic drug materials collected directly from nature as well as for the crude drugs as now occurring in American commerce for the purpose of improving, if possible, the National Formulary VI monograph of Stillingia.

Stillingia. Measurement of the starch grains of several samples have shown these to be up to 52 microns in diameter or length instead of up to 45 microns as stated in the N.F. VI. The Formulary rubric requirement that Stillingia which has been stored for more than 2 years must not be used appears justified on the basis of extraction tests made on roots stored for 2 weeks, 6 months, 2 years and over 2 years respectively. The percentage of resin in alcohol extracted drug was 8.16% for 2 week old sample, 7.97% for that stored 6 months, 6.65 for drug stored 2 years and 5.6% for drug stored over 2 years. The color of the alcoholic extract of these samples was respectively yellow to orange yellow, reddish, reddish-brown, deep reddish-brown. The pungency of these extracts was also found to diminish with the increasing age of storage of the crude drug.

National Formulary Drugs. IV. Apocynum, by Heber W. Youngken and Raymond W. Vander Wyk.

An investigation of authentic drug materials collected directly from nature as well as of the crude drugs as now occurring in American commerce for the purpose of improving, if possible, the National Formulary VI monograph of Apocynum.

Apocynum. The commercial drug at present and for many years past is found to consist of a mixture of varying proportions of the rhizomes and roots of *Apocynum cannabinum* and *A. androsamifolium* or of *A. androsamifolium* only. Studies of the underground portions of both of these species show that these consist of short vertical rhizomes from which arise long, thick, horizontal gemmiferous roots (often mistaken for rhizomes), that the horizontal, woody, gemmiferous root gives rise to lateral buds at intervals which form vertical rhizomes, that the aerial stem is continuous with the rhizome, that the rhizomes and horizontal gemmiferous roots give rise to slender fibrous rootlets.

The results of gross and histological studies on the rhizomes and roots of both species are reported, as well as distinctions between both species, foreign matter and ash.

Fluidextracts of pharmacognostically authenticated Apocynum cannabinum and *Apocynum androsamifolium* were tested pharmacodynamically and their relative potency determined by the One Hour Frog method. It was ascertained that the M.S.D. of *A. cannabinum* drug is 85 mg. per Kg. or approximately 6 times the potency of Digitalis, and that the M.S.D. of *A. androsamifolium* on frogs is 225 mg. per Kg. of approximately twice the potency of Digitalis. The difference in potency between the two species undoubtedly explains the inconsistent results obtained from the use of the commercial drug in the past, since it has consisted of varying amounts of these species. As a way of overcoming the difficulty, it is suggested that a standard of assay be introduced into the next revision of the N.F., using the one hour frog method for bioassay and requiring Apocynum to have twice the potency of Digitalis. It is also suggested that both of these species be included as official sources of Apocynum, since they have been shown to possess the same physiological action, and are more potent than Digitalis (U.S.P.)

Fungal Infestations of Powdered Drugs, by Fanchon Hart.

To what extent are moldy drugs and drug powders inferior in quality?

The author has endeavored to determine the changes in plant structure due to some common mold infestations.

Consideration has likewise been given to the Fungi and an attempt made to determine their preferences for the different plant constituents.

Their morphological changes on various drug media is important from the viewpoint of identification.

Possibilities of Synonymy in Genus Delphinium, by Joan Coons and C. W. Ballard.

Owing to the tendency of systematic botanists to propose varieties and subspecies in the large genus Delphinium, much confusion has arisen in regard to identification. Clear identifications of the situation are apparent in the conflicts encountered in morphological descriptions. Perhaps the range of variation allowable within a species is responsible for the duplication which

one finds in herbarium specimens. Histological examination of specimens of Delphinium azureum, carolinianum, albescens, vireschens, camporum, Penardi, and Nortonianum, in which the type of trichome found to be present on the leaves was of chief importance, it would seem to indicate that these are synonyms of one another rather than separate species. This, moreover, is substantiated by morphological descriptions. The work while not complete seems indicative of the possibility of a reclassification of the various species of genus Delphinium according to histological structures, omiting many superfluous names.

Insect Infestation of Drugs, by Bernard L. Blumberg.

1. An extensive list of insects attacking drugs and the specific drugs which they attack has been compiled from various sources.

2. The literature on the physical changes produced in drugs during infestation, and the chemical constituents and structures removed from drugs by insects is presented. In general it would seem that carbohydrate containing drugs are quite susceptable to insect attack, but if other beetles, e. g., S. panicea may be judged by Tribolium, carbohydrates are not the only substances required. Protein and/or fats are also necessary.

3. Tribolium is not a serious drug pest; of the thirteen drugs listed in U.S.P. XI as being especially liable to insect attack, only ergot and linseed permitted this beetle to reproduce. Orris, ginger and althea root sustained life for varying lengths of time.

4. Contrary to previous reports Tribolium could not be cultured in capsicum, nutmeg, cinnamon or mustard.

5. Tannic acid and calcium oxalate individually are unfavorable to Tribolium, while aloin has little effect.

6. It is recommended that further work be done on the pharmacognostical aspects of insect infested drugs with a view to furnishing more complete information on the chemical and botanical alterations produced in such drugs. This may ultimately influence official descriptions and standards. It is also suggested that an analytical method for the identification of insect fragments and eggs be perfected and included in standard pharmacognosy books. One such method previously devised is reviewed here.

Changes in Ergot with Various Moisture Contents Under Different Conditions of Storage, by B. V. Christensen and J. A. Reese.

Part I. Reexamination of Old Ergot. Ergot which was stored in ground, glass-stoppered bottles for six years with moisture contents between 8.3 per cent. and 12.8 per cent. was reexamined using the U.S.P.XI Cock's comb and the colorimetric methods of assay. Four lots were examined.

Part II. Changes in Ergot with Various Moisture Contents Stored in Air-tight Containers at Different Temperatures. Thirty-eight samples from 4 lots of ergot were stored in air-tight containers for seventeen months at 21, 27, 32 and 38 degrees Centigrade, and at room temperature. The moisture content of the ergot was varied from 6.6 per cent. to 12.6 per cent. Results are given for the colorimetric and Cock's comb assays before and after storage. The moisture content of representative samples was redetermined after storage.

Part III. Changes in Ergot with Various Moisture Contents Stored in Open and Closed Containers at Different Temperatures. Ergot with moisture contents from 3.2 to 10.2 per cent. was stored in various types of open and closed containers at 21, 27, 32 and 38 degrees Centigrade, and at room temperature. Sixty-four samples from 4 lots of ergot were used. Results are given of the colorimetric and Cock's comb assays before and after storage for seven and eight months. A summary of the changes in physical condition is given.

Part IV. Relationship of Ergonovine to the Total Alkaloids of Ergot after Storage of the Drug with Various Moisture Contents at Different Temperatures. The total alkaloids and the ergonovine content of 24 samples of ergot from 6 lots were determined colorimetrically. The samples contained from 6.6 to 12.6 per cent. moisture and were stored from seven to seventeen months at 21, 27, 32 and 38 degrees Centigrade.

Part V. Relationship of the Alkaloids of Ergot to the Cock's Comb Assay. Comparative data are given of the total alkaloids of Ergot, total alkaloids of fluid-extract of ergot, ergonovine content of ergot, ergonovine content of fluidextract of ergot, Cock's comb assay of fluidextract of ergot and Cock's comb assay of the total alkaloids of ergot. The results were obtained from six lots of ergot.

Deterioration of Digitalis Leaves, by B. V. Christensen and Robert Blackwell Smith, Jr.

Forty-four samples of digitalis leaves containing varying amounts of moisture were stored in air-tight and open containers at several controlled temperatures for a period of one hundred days. The samples were assayed before and after storage by the U.S.P.XI One-hour Frog Method. Every sample exhibited some deterioration at the end of the storage period. No correlation was found to exist between the amount of deterioration and the storage conditions.

Bioassay of Phenolphthalein, Using the Rhesus Monkey, by K. A. Bartlett and R. H. Herbine.

Studies on a colony of 23 male and female Rhesus monkeys (Macaca *mulatta Zimmerman*) have been made to develop a bioassay for laxatives. During the last two years, special attention has been given to phenolphthalein. The selection of suitable animals, housing and care, diet, technique, methods of standardization are presented, leading to a proposed method of bioassay. The threshold doses of phenolphthalein required by different animals varied from 1.8 to 7 milligrams per kilo of body weight following oral administration. Doses of unknown samples are given in terms of the threshold dose to groups of nine monkeys each. The P. E. of this method was 8.31%. The use of Rhesus monkeys for the bioassay of other laxatives is being studies.

Bioassay of Laxatives, by James C. Munch.

The detailed survey of the literature has been made, and some laboratory experiments conducted, with the hope of developing more precise methods for the bioassay of laxatives. Although some attention has been paid to the emodines, most of the laboratory work has been done with phenolphthalein. Studies have been made upon Daphnia, mice, rats, guinea pigs, rabbits, cats, dogs and humans. Isoated intestinal strips and intestinal perfusion methods have been used, as well as studies upon intact animals. Studies upon the Rhesus monkeys which I have observed by Bartlett and Herbine and by Loewe are presented at this meeting, giving the detailed technique for the bioassays upon the Rhesus monkeys. For the routine bioassay of phenolphthalein, it appears that tests upon Rhesus monkeys are the most satisfactory; that tests upon mice have some value.

Standardization of Laxatives Through Bioassay on Monkeys, by S. Loewe.

During a fifteen year investigation upon the assay of laxatives on mice, cats, guinea pigs, rabbits and monkeys, the author found it necessary to focus more and more attention on the use of mice and of monkeys. After a brief discussion of Loewe's "dye-meal methods" of bioassay on the mouse, the paper deals with 3000 experiments on 128 monkeys, in which the author's method of assay on the Rhesus macacus had been developed and verified. Referring to extensive studies of the basic problems (species susceptibility to various laxatives, variation of inter- and intro-individual susceptibility) the essential details are presented for selection of animals, housing, diet, methods of administration of the laxatives, standards of reference, interpretation of results, and on the reproducibility which was found within plus—minus 50%. Examples of the procedure and detailed directions are given for the use of the method as applied to various purposes (comparing either various drugs or various preparations of the same drug). Whereas the "dye-meal methods" on the mouse were found useful for assaying the more restricted number of drugs effective in the mouse, the monkey method is the procedure of choice for assaying these and all other laxatives, due to the fact that the response of the Rhesus to laxatives is most similar to that of man.

Anesthetic Compounds for Treatment of Burns, by D. T. Meredith and C. O. Lee.

Benzocaine picrate has been prepared and its anesthetic and antiseptic properties tested. It is a yellow, crystalline solid, melting at 161°-162°. An analysis of it indicates that one mole of benzocaine has combined with one mole of picric acid. This compound differs both on melting point and combining ratios from the one which has been reported in literature.

Attempts were also made to combine benzocaine with tannic acid. The results were less favorable than with the picric acid.

Further Evidence of the Strong and Variable Action of the U.S.P.XI Digitalis Standard, by L. W. Rowe.

The more specific effect which permissible amounts of alcohol has upon the rate of absorption and action of active extracts of the U.S.P.XI standard digitalis powder in the official one hour frog method than upon other tinctures, is shown experimentally. Erratic and variable comparative results which are thus obtained on the same digitalis preparation are given. This is not a serious factor in the comparative tests by the M.L.D. frog method.

The previously reported greater activity of the U.S.P.XI standard over the International digitalis standard is confirmed experimentally and the suggestion made that both the official method and the standard for comparison be changed to conform exactly with the present International standard.

Acquired Tolerance to Certain Short-acting Barbiturates, by Minoru Masuda, R. N. Budde, and J. M. Dille.

Using sleeping time as a criterion, tolerance was investigated for nembutal, pernoston, amytal, ortal, and evipal. Anesthetic doses were administered daily and the sleeping time, as measured by the absence of the righting reflex, noted. There was a definite decrease in the sleeping time for nembutal, pernoston, and amytal, and no decrease with ortal or evipal. The tolerance disappeared within a few days after the daily administration was stopped as evidenced by a period of sleep which was approximately equal to that produced the first time the drug was given.

In view of the assumption that the short-acting barbiturates are destroyed almost completely in the body a comparison of the rate of destruction as determined by the disappearance of amytal from the blood, liver and muscle of tolerant and non-tolerant animals was made. It appears that there is a somewhat more rapid disappearance of this drug in tolerant rabbits, favoring the assumption that the tolerance is due to more rapid detoxication of the barbiturate.

A comparative Study of the Antipyretic Activities of Acetanilid and Some Fluorinated Acetanilids, by Melvin F. W. Dunker and Marvin R. Thompson.

The antipyretic activity of p- and m- fluoroacetanilids and p-chloroacetanilid has been studied on cats. Neither of these substituted acetanilids was found to possess any antipuretic activity in reasonable doses when compared to acetanilid. p-Fluoroacetanilid whom given in fatal doses showed the same acute symptoms as acetanilid differing only in that it produces less salivation and dilation of the pupil. When injected intravenously in solution in 10% alcohol, p-fluoroacetanilid and acetanilid produced similar blood pressure tracings. p-Fluoroacetanilid shows no greater acute toxicity for cats than does acetanilid.

The Pharmacology of Soaps, by Leroy D. Edwards.

The soaps of the saturated fatty acids, when arranged according to their greatest hemolytic value, fall

in the following order: laurates, myristates, palmitates, and stearates. Oleates are more hemolytic than saturated fatty acid soaps, and ricinoleates are intermediate between palmitates and stearates. On earthworm segments the following order of toxicity has been established: sodium laurate, sodium myristate, sodium oleate, sodium ricinoleate, sodium palmitate, and sodium stearate.

Increase of Bactericidal Action of Germicides by Variation of pH, by Paul Goedrich.

The action of Germicides in the lower ranges of pH has been studied and it has been found that a decrease in pH generally corresponds to an increase in germicidal effect.

As it is known that acids also possess germicidal properties, controlled experiments have been made to establish how far the acids are responsible for this increase.

It was found that only a minor part of the increase in germicidal effect can be attributed to the acid alone and that the combined action of acids or acid salts with the Germicides is responsible for the considerable increase in germicidal effect. It was found that this action is not selective but is applicable to all types of Bacteria, Molds, Fungi, etc.

As a consequence of these findings we see that germicidal solutions, which do not possess an effect upon resistant sporebearing organisms will become Sporicides in the same concentration at a lower pH.

As there is evidence that solutions of low pH have no harmful effect in open wounds or on the mucous membranes, the acidification of Germicides within certain limits can be regarded as not objectionable to their use.

Assay of Fluid Extract of Ergot, by Asa N. Stevens.

A brief review of data previously presented comparing the Colorimetric, Cock's Comb and Broom and Clark methods of assay.

Additional experimental data will be presented to show that a colorimetric method may be used to estimate the total alkaloids in the fluid extract of ergot and also to determine those alkaloids which are sparingly soluble in water.

Assay of Strychnine in Tincture of Nux Vomica, by S. G. Mittelstaedt and K. L. Kaufman.

This study led to the following conclusions:

1. The special shaking apparatus devised for these studies decreased the time necessary for a series of assays.

2. A critical comparison of several common assay methods indicated that either the U.S.P.XI Interim Revision or the B.P. 1932 processes were more satisfactory than the others studied.

3. Freezing the tincture at −7° C. decreases the amount of strychnine recovered in the assay (U.S.P.XI Interim Revision Method).

4. Potassium iodide T. S., alone, or in the presence of various buffers, failed to precipitate strychnine quantitatively. In no case, was more than 15 per cent. of the total alkaloid recovered.

5. Normal sodium hydroxide precipitated strychnine very efficiently from a mixture of its sulfate and brucine sulfate. While time did not permit further study, it is strongly believed that this fact may be applied to a shorter and more accurate analysis of the tincture and other preparations of Nux Vomica. Buffer solutions could probably be utilized for the purpose.

Assay of Sulfanilamide, by R. M. Hitchens and R. W. Towne.

A potentiometric diazotization procedure for the assay of sulfanilamide sensitive to 0.1% is described. A crystallizing point procedure, likewise sensitive to 0.1%, is described. The two methods together constitute a precise procedure for estimating the purity of sulfanilamide to 0.1%. The crystallizing point of pure sulfanilamide is 164.8° C.

Time Variants in the Assay of Oil of Peppermint, by L. H. Baldinger.

In order to determine whether an increase in the length of time of acetylation and of refluxing in the assay of oil of peppermint would result in an increase in the total menthol content, samples of oil of peppermint were acetylated for periods of time varying from fifteen minutes to three hours, and the acetylated samples were refluxed with alcoholic potassium hydroxide for periods from fifteen minutes to two hours.

From a general average of eighty-four samples it appears that acetylation for more than fifteen minutes is not essential, but that more consistent results are obtained when the acetylated oil is saponified by heating for sixty minutes.

Higher percentages of total menthol in those samples of oil acetylated for three hours are believed to be due to reactions between the oil and acetic anhydride other than that involved in the acetylation of menthol.

Detergent Qualities of Soft Soaps, by Edward D. Davy.

A great deal of work has been done in an effort to rate detergents. It is generally agreed that surface tension and emulsifying power are perhaps the more important factors upon which detergency is dependent.

A comparison of S.T. and pH in soap solutions was made from the following oils: Corn, Soya Bean, Coconut, Linseed and three brands of Oleic Acid.

The ability to emulsify mineral oil was taken as the measure of emulsifying power. A measure of the separated soap solution served as a means of comparison.

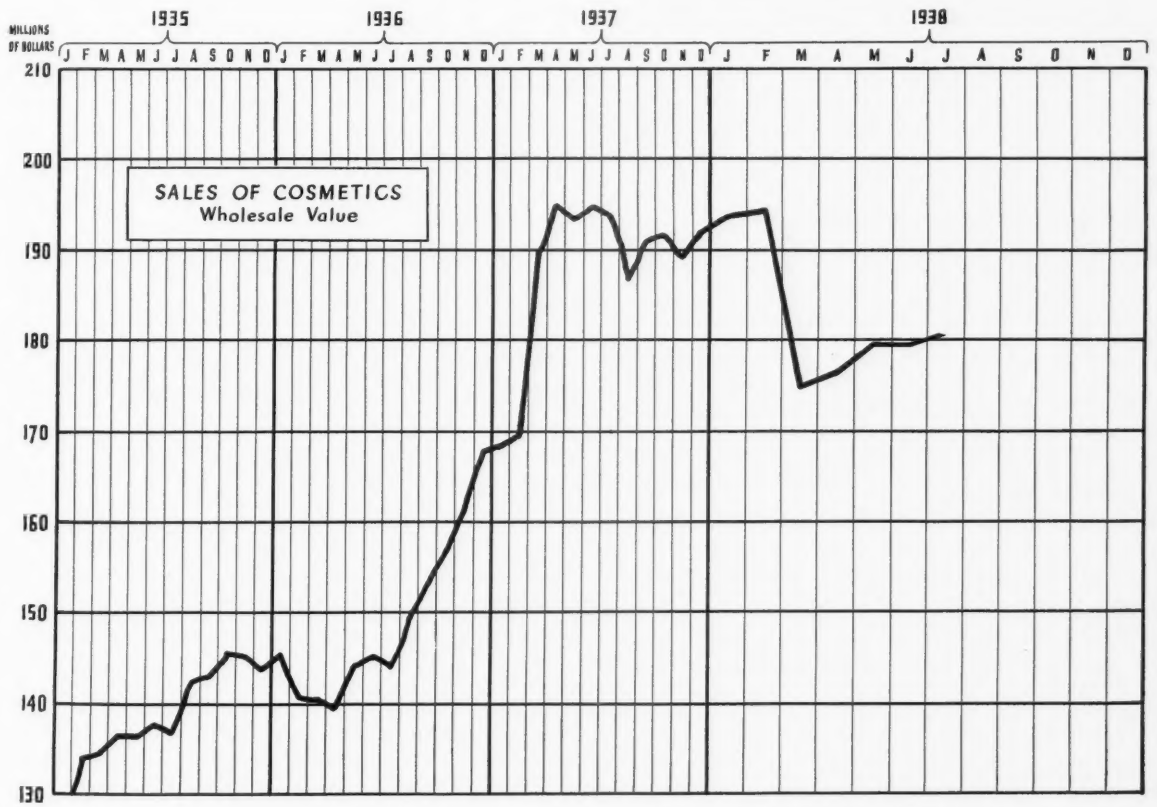
Determination of Mandelic Acid in Calcium Mandelate, Elixir of Mandelic Acid and Monoethanolamine Mandelate, by A. N. Stevens and Edward J. Hughes.

This determination includes extraction of the mandelic acid with ether in acidified solution, subsequent evaporation of the ether and titration of the mandelic acid in neutral alcohol using tenth normal barium hydroxide.

MERCHANDISING NEWS

FORECASTS OF THE SIZE OF THE COMING CHRISTMAS business show a considerable improvement over previous figures. Buyers are again interested in higher priced merchandise. In gift sets the drift is to larger units, containing more articles each. Four items in shaving sets and even more in women's combination packages are indicated. Utility bags and dressing table sets are in good demand. Low unit price chain stores will make an extensive drive for better merchandise and larger packages in gift wrappers.

Buyers expect this to be a good cosmetic season. The fashion favors large units as customers probably will use more of each article. The outlook is especially promising for face powders, powder bases and make-up. The bare shoulder dresses, which have been heralded for a while, now seem to be definitely in and are to hold through the winter. Novelty trends in make-up are still comparatively few but sufficiently far reaching to make neces-


MILLIONS OF DOLLARS
1935
1936
1937
1938
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
210
200
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130
SALES OF COSMETICS
Wholesale Value

The wholesale value of cosmetics and toilet preparations sold in the twelve month period ended July 1938 was equal to $180,735,000, a decline of 6.8 per cent. from the $193,806,000 for the year ended July 1937.

sary important changes later in the season. The drift is still to lighter shades, but some doubt is expressed whether it will be maintained into Spring.

Druggists in key locations say that they have noticed an increasing demand for hair colorings. This may be still an after effect of the recession but more younger women are buying hairdyes than before.

The interest in bouquet scents apparently is still growing. More of them are sold and customers begin to ask for the larger sizes.

Hopeful signs in the situation are: The unexpectedly large demand for out door cosmetics during the recent tourist season, the good results that have followed novelty promotions all through the summer and the reception given to late season try outs. The impression is that business might have been better if stores had maintained larger selections and stock reserves. As it is sales were lost often in consequence of low stocks and broken assortments; especially in the larger sizes of high-class perfumes.

Prices appear to hold steady. Buyers advise against price rises at this time but see no need either to lower them.

DRUG AND RESEARCH CONCERNS in this country will spend $24,943,500 for research and scientific development of new products in the coming year, according to a four-month survey by the New York Board of Trade. The survey disclosed that 19,236 persons are engaged in test and experimental work on proposed new products, some of which may not be put on the market for five years. Research and improvements on existing drug and cosmetic products will cost $8,196,500, requiring 5,384 additional employees, during the year.

ADVERTISING SELLS OR SINKS: "America—You Sell or Sink" is the title of a new booklet issued by Townsend & Townsend, Inc., New York, which discusses the economics of advertising and its place in business success. The book states that most executives view a cut in advertising with equanimity because they are convinced that everyone already knows the company and its products. It gives this formula to prove the fallacy of such reasoning:

1. Eighty per cent. of all mental impressions are lost during the first 30 minutes.

2. It is not what a man knows that causes him to act; it is what he thinks of.

"Eighty per cent. of what you have told them has been forgotten," it states, "and the remaining part of the information which lies in their minds causes them to act only if and when they think of it.

"Through advertising you may have placed in the card index files of millions of minds the name of your product, its qualities and benefits, but if you want them to buy and buy and buy, day in and day out, week in and week out, year in and year out, you must continually and consistently remind them to pull out the index card and re-read it and act."

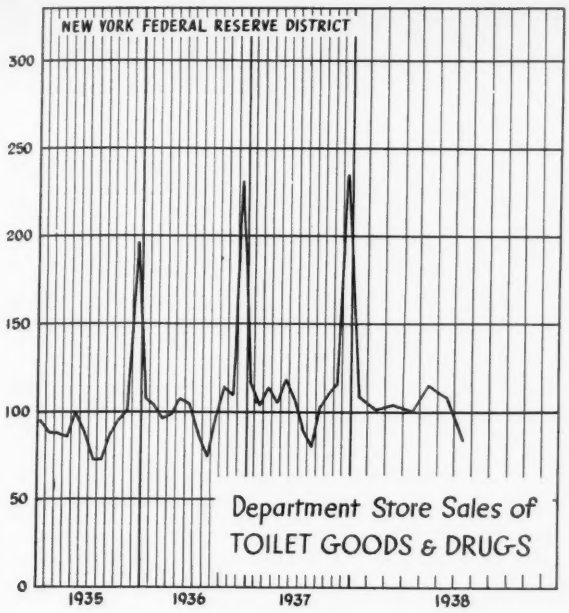
From now on..
FEEDS SKIN?
NO NATURAL SKIN OILER
RESTORES YOUTH ???
CAN'T CLAIM TO KILL US GERMS HA! HA! HO!
CURES FLABBY FACE MUSCLES?
NO VITAMINS ?? HORMONES IN NAIL POLISH !!
BEFORE
AFTER
OUR EYE WASH WILL STRENGTHEN RETIEVE STRAIN RESTORE YOUTH CLEAN AND ALLAY IRRITATION
CURES PYORRHEA
KEEP YOUR FRECKLES LADY! ... AND YOUR BLACKHEADS AND YOUR CROW FEET TOO
TEETH STAY YELLOW WITH OUR TOOTHPASTE
CLAIMS FOR REDUCING CREAMS OUT
PAY US AND ~~COME~~ YOUR DANDRUFF HELP

"COPYMAN'S NIGHTMARE" from "Tide" August 15, 1938

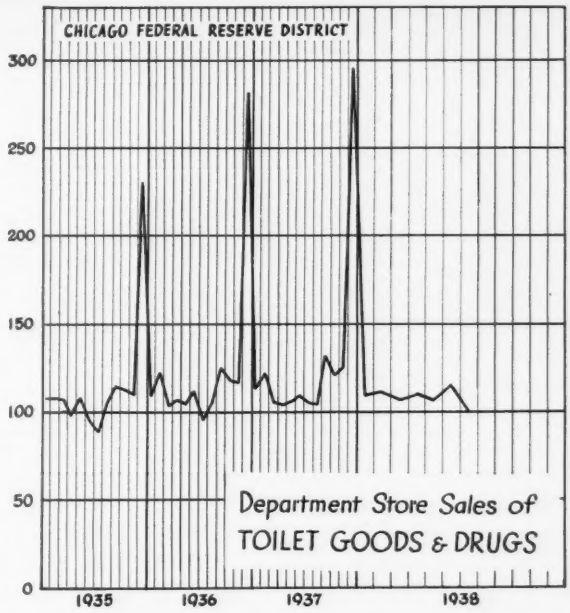
COPYMAN'S NIGHTMARE: The nearby cartoon from "Tide" tells something of what cosmetic manufacturers are up against in the matter of cleaning up labels, booklets, and advertising claims so that they conform with provisions of the Wheeler-Lea Amendment and the Copeland Act. The sound and the fury are beautiful to behold and the Washington monument should soon disappear from sight under the labels, booklets and advertisements piling into Washington for official consideration and, it is fondly hoped, approval.

So far as general guidance is concerned, the best piece of work which has been done so far is that of the Board of Standards of the Toilet Goods' Association, which has issued a list of advertising claims subject to caution and a list of claims not acceptable. This list was published in our August issue, page 200, and should be filed for ready reference.

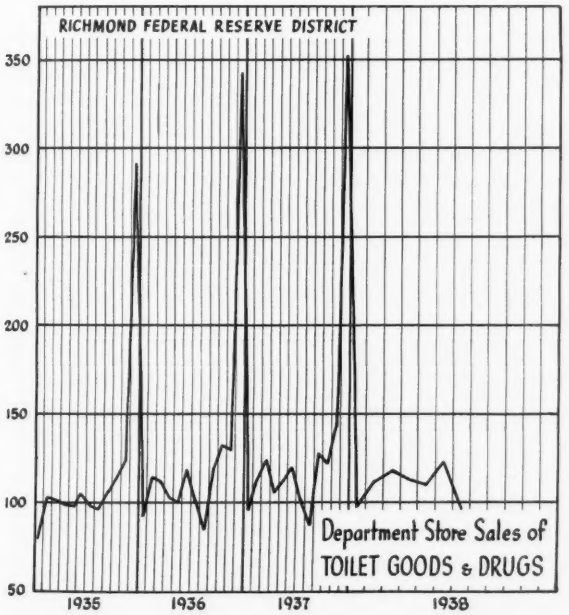
SHOE COSMETICS: Add to the apparently increasing number who think that marketing cosmetics is comparatively easy the Wizard Company of St. Louis which has introduced a line of shoe preparations with a glamor appeal. Optimistically termed shoe cosmetics and advertised as a beauty treatment for shoes with cosmetic bars, smartly styled packages and the make-up approach, the company has high hopes for the reception of these "Trimfoot" shoe cosmetics. The ensemble display consists of suede cleaners, fabric cleaners, shoe cream and suede buffer.



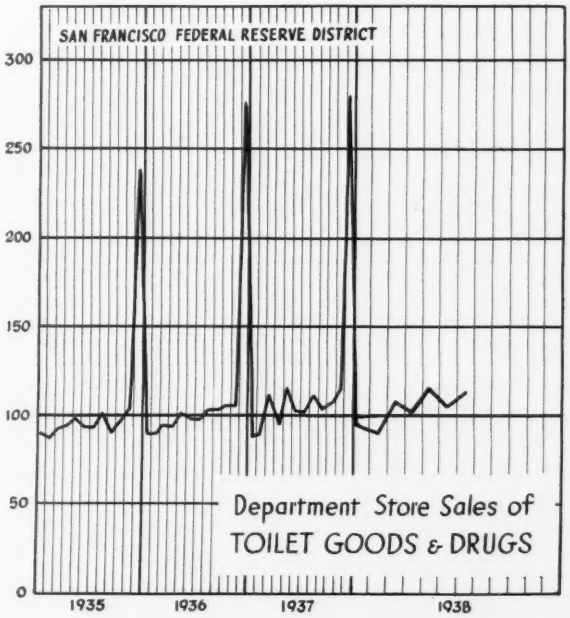
Retail sales of toilet articles and drug sundries by department stores in the New York Federal Reserve District were 8.0 per cent. less in July 1938 than in the same month of the preceding year. Corresponding index numbers (unadjusted) were 83.4 for July 1938, 108.9 for June 1938, and 90.7 for July 1937.



Sales of toilet goods and drugs by department stores in the Chicago Federal Reserve District were 4.2 per cent. less in July 1938, compared with July 1937. Corresponding unadjusted index numbers were 100.9 for July 1938, 114.8 for June 1938, and 105.3 for July 1937.



Sales of toilet articles and preparations by department stores in Baltimore were 5 per cent. less, in Washington were 4 per cent. less, and in the whole Richmond Federal Reserve District were 5 per cent. less in July 1938 than in July 1937. The unadjusted index numbers for the whole district were 96.4 for July 1938, 122.1 for June 1938, and 101.5 for July 1937.



Sales of toilet articles and drug sundries by department stores in Los Angeles increased by 13 per cent., in San Francisco by 16 per cent., in stores of the Pacific Northwest increased by 6 per cent. and in the whole San Francisco Federal Reserve District were 11 per cent. greater for July 1938 than in the same month of 1937. The unadjusted index numbers for the whole district were 112.8 for July 1938, 104.9 for June 1938, and 101.6 for July 1937.

PACKAGING NOTES

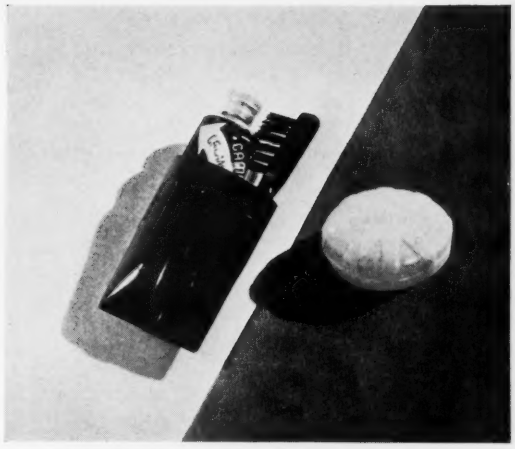
AMULET: Mary Dunhill is introducing "Amulet" perfume, which was inspired by the amulets or good luck charms worn by the beauties of the ageless East. The inspiration appears to be a happy one since charms are very definitely part of the fashion picture. The odor is as oriental as the origin of its name. The amulet idea is cleverly carried out in connection with the package also. A small filigree charm is attached by a dainty chain to the cover of the package. It opens like a locket and may be filled with cotton which in turn may be saturated with a few drops of the Amulet perfume. The charm then serves a double purpose—it enables the consumer to get an idea of the fragrance from the amulet in the store and it makes an intriguing addition to her charm collection when she purchases it, because it can always be freshly perfumed. The bottle which contains Amulet perfume is tall and graceful, fluted on both sides so that it fits snugly into the grooves of the box. It is topped with a large fluted frosted glass stopper and carries a dusty rose label with wine lettering. The box is shaded wine at the bottom going into a dusty rose with a dusty rose satin ribbon on the cover.

SHAVING MARKET: What with the leading electric shaver cutting its price to $12.50 from $15.00, and with one of the runners-up cutting to $7.50 from $15.00, and with apparently perfectly usable electric razors appearing priced as low as $1.98, the shaving cream and shaving soap manufacturers continue the search for new products to replace the old in a gradually diminishing market. We prophesied here that there would be $5 electric shavers by Christmas of 1936. Events proved that we were somewhat ahead of developments in this field. But even we did not expect to see the boys rush prices down as they are doing for Christmas of 1938 and we certainly did not anticipate a $1.98 electric razor by this time. And those who know say that the end is not yet in sight, so far as a very hectic and scrambled price situation is concerned.

LOVELY PACKAGE: The Roger & Gallet "Bonbonnette" is the most effective combining of glass and plastic in a package that we have seen. The distinctive little demijohn which is used for eau de Cologne, is cradled in an ivory-tinted plastic nest. Both bottle and mould have a thread so that the bottle sets securely within the attractive mould. It is capped with an ivory-tinted moulded screw-cap to match, with a small dark red label attached to the neck of the bottle with a small chain. It is available in 4 and 8 ounce sizes and in the Fleurs d'Amour, Oeillet Bleu and Fugue fragrances. Roger & Gallet has also introduced two other eau de Cologne presentations.

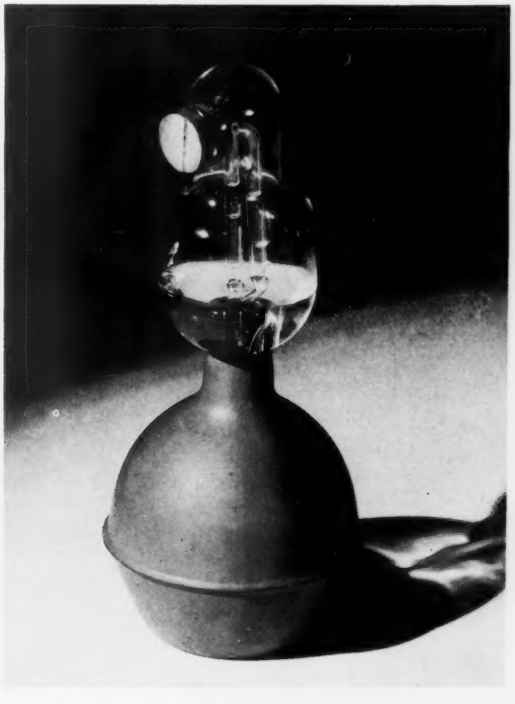
"EYE-LIFTS," a new device for eye beauty, is not a cream, lotion or drops, but a mask of featherweight felt that comes saturated in a solution. One of the "lifts" pressed gently over the eyes and cheekbones and left on for five minutes, helps to take away that tired look, benefits the eyes and modifies age lines and even wrinkles. Eye-lifts are packaged ten to a handsome black jar which sells for two dollars.

CARR-LOWREY'S NEW GLASS-STOPPERED eau de Cologne bottle has a solid glass foot, a feature that was formerly only available on the expensive imported bottles. Both bottle and foot are molded in one piece and hand blown. An attractive scallop design decorates both bottle and stopper and space is reserved for label placement. The bottle is an unusually attractive stock design with the unique features noted.



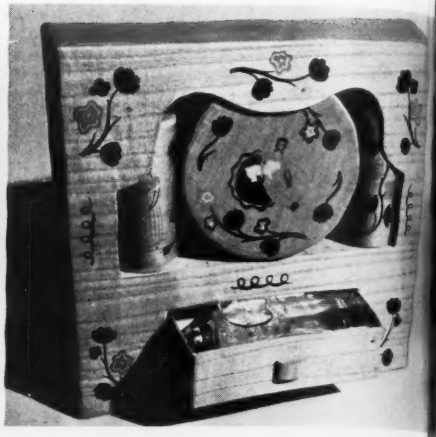
ALL FOR 10 CENTS: A tiny tube of mascara and a small mascara brush are snugly fitted into a smart moulded purse vanity which is black with a dusty pink cap. It can be conveniently carried in a handbag, handy for the office, for parties, at the beach, with no chance of ruining or smudging the purse and certainly taking up very little space. The gadget comes fastened on to a small attractive display card and retails for ten cents.

ATOMIZER: The all glass atomizer illustrated here is not only somewhat unusual in design and construction but also gives a beautifully vaporized spray. It should be particularly good for oral sprays of various types. It is being sold by Tempex Manufacturing Co., New York.



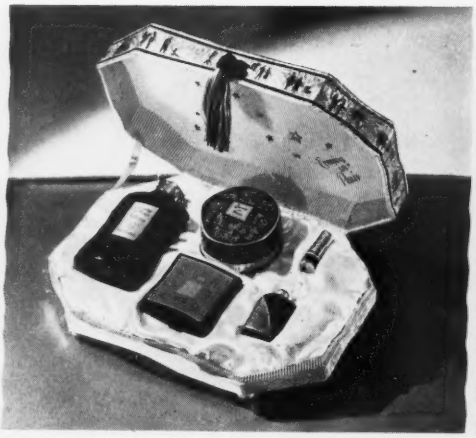
COTY

REVLON



SHULTON

SUZANNE

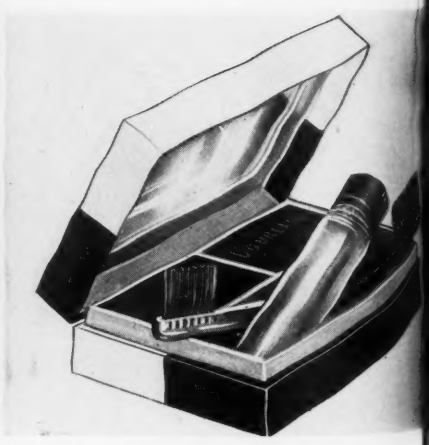


BOURJOIS

YARDLEY

BARBARA GOULD

DOROTHY GRAY



MICHEL GOURLAND

HOUBIGANT

CORDAY

LA CROSS

COTY

Among the many holiday gift creations by Coty is the Paris ensemble illustrated. As with the entire group of Paris gift sets, this one is known by a distinct name —"Opera" and contains perfume, "Air Spun" face powder, toilet water and talc.

REVLON

One of Revlon's new line of "Royal Family" gift sets is this handsome nail-beauty-kit "Highness," prepared in advance of the holiday season. The case is in two-tone washable fabrikoid—pearl white and French gray tooled in silver.

SHULTON

One of the new combination sets of Early American toiletries ready for the Christmas trade is the Early American wall box. Nestled in the shelf is a box of Old Spice dusting powder and two tubes of Old Spice bath salts. The drawer holds one four ounce bottle of toilet water.

HOUBIGANT

Houbigant is offering the petit modele presentation of one of its favorite perfumes, Parfum Presence, beautifully presented in a crystal faceted flacon in a green moire coffret—an exact replica of the modele original.

LEHN & FINK

New Christmas packaging is coupled with a special deal for retailers in the Lehn and Fink Products Corp. seasonal drive on behalf of Hinds Honey and Almond Cream. Both the dollar size and the ten cent size bottles of the hand lotion are dressed for effective counter display in holiday green and gold wrappings decorated with bright red bells.

SUZANNE

Suzanne's "Secret of Suzanne" is being presented in a complete new series of packages. The modernistic packages are luxurious in appearance in rich tones of shaded brown and gold.

BOURJOIS

Among the many new Evening in Paris gift sets is the one illustrated. It contains face powder, lipstick, perfume, talcum and a single loose powder vanity.

YARDLEY

Yardley introduces April Violets toilet water for those who love the odor of wood violets. The bottle is hexagonal and somewhat chunky, suitably capped with a round, dull gilt stopper.

CORDAY

Corday's new perfume Tzigane —"for the Gypsy in your soul" is an exotic fragrance reminiscent of vibrant gypsy music. It comes in a modernistic flacon designed by Rene Lalique, in a coffret which takes the form of a violin.

LENTHERIC

In a new and amusing vanity, the "Golden Monkey," Lentheric mimics the whole idea of vanity. Engraved on the cover sits a droll little monkey, arch mimic, proffering a bouquet to her who peers within. The vanity is the capacious new snuff-box type.

BARBARA GOULD

The Barbara Gould deluxe travel kit is smart and convenient. It is finished in simulated natural rawhide and contains five full size cosmetics and seven special sizes, all compactly arranged within the cleverly styled case.

DOROTHY GRAY

Dorothy Gray's bow puff dusting powder comes in a dainty and feminine package. The satin bow (pink on the rose geranium and blue on the jasmin) shows through a transparent cover. With pastel blue base, trimmed in gold, this box has eye-catching appeal for counter display.

MICHEL GOURLAND

Michel Gourland's Eye Cosmetique comes in two sets of shades, blue and black or brown and black, with separate brush for each and a liquid for applying. The lighter shade is suggested for a delicate makeup and daytime wear. It is said to be waterproof.

LA CROSS

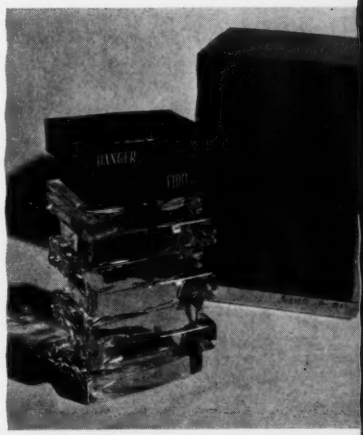
The La Cross combination set contains a jar of glycerated polish remover pads and full size bottles of creme nail polish and Stazon, colorless base coat. The package is in glossy white cardboard freshly lined with sky blue.

PARFUMS CIRO

Parfums Ciro's newest perfume, "Danger," comes in a bottle which is designed to suggest oblong blocks of crystal built up towards its black stopper.

LEHN & FINK

LENTHERIC



PARFUMS CIRO

DAGGETT & RAMSDELL

Daggett & Ramsdell's new beauty kit has been christened "The Perfect Five" because it contains what they consider the five essential products for the care of the skin. The kit comes in an attractive cream and chocolate colored box and is most convenient and space-saving. It contains Golden Cleansing cream, Perfect tissue cream, foundation cream, and bottles of skin tonic and hand lotion.

DAGGETT & RAMSDELL

ALEXANDRA DE MARKOFF

Alexandra de Markoff has made two additions to the line: Face powder in a new size to sell for $1.75. The shades are as heretofore and the face powder is the same in texture, quality and odor as the $3 size. Foundation Cream is a new preparation, in one size only. The shades are naturelle, rachel and golden bronze.

ALEXANDRA DE MARKOFF

RICHARD HUDNUT

One of the interesting items in the Richard Hudnut holiday line is the DuBarry Duo compact with the "pick-a-pack" lipstick. This is a loose powder compact with a full size DuBarry lipstick cleverly placed in it so that it is part of the compact when it is closed but can be taken out and used conveniently the same as any other lipstick.

RICHARD HUDNUT

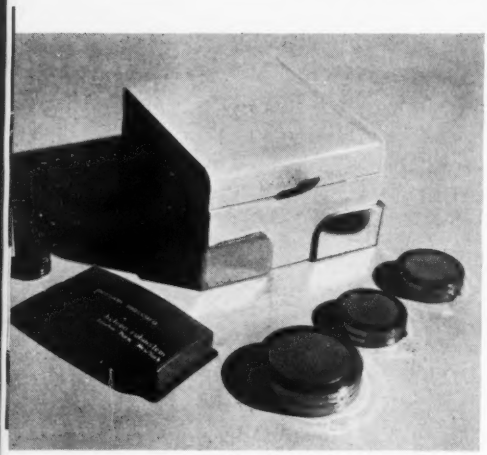
KATHLEEN MARY QUINLAN

For those who favor Rythm perfume and Cologne, Kathleen Mary Quinlan has created dusting powder scented with Rythm fragrance. The dusting powder is boxed separately or in a combination bath set with a bottle of Rythm Cologne. The bath set will have a special gift wrapping for the holiday season.

KATHLEEN MARY QUINLAN

HELENA RUBINSTEIN

Helena Rubinstein has created a complete Orchid make-up to complement the orchid-purple-violet fashion colors which will be featured this Fall. The new make-up consists of a rich orchid red lipstick and rouge, orchid eye shadow, deep orchid mascara, orchid red nail groom and champagne rose face powder.



HELENA RUBINSTEIN

PINAUD

The Parfum Preface ensemble set, one of the extensive holiday presentations from the House of Pinaud's gift line, contains a crystal-cut bottle of "Preface" and a bottle of Cologne, smartly packaged. Another holiday combination is the Twin Set, in a Parisian box of French and midnight blues, composed of a bottle of Red Seal eau de Cologne and Chypre eau de Cologne in neat fluted bottles with moulded caps.

PINAUD

Green—symbolic of nature's most productive season, offers a wide variety of hues which harmonize with other colors to perfection. Its use in package design invites the widest possible acceptance and above all it is "easy on the eyes"...Continental's packaging designers apply these facts in creating "selling containers" for you. And, batteries of modern lithographic equipment, manned by expert craftsmen and aided by superior printing plates made in our own master engraving plants, assure faithful reproduction of your package design...Does one of your "package family" need a new "dress"? Possibly we can make a suggestion or two which will solve your packaging problem.

ONE OF A SERIES DEVOTED TO THE USE OF COLOR IN PACKAGING DESIGN. COPYRIGHTED, 1938.

Continental Can Company

NEW YORK · CHICAGO · SAN FRANCISCO · MONTREAL · TORONTO · HAVANA

Make your product look *True Blue*

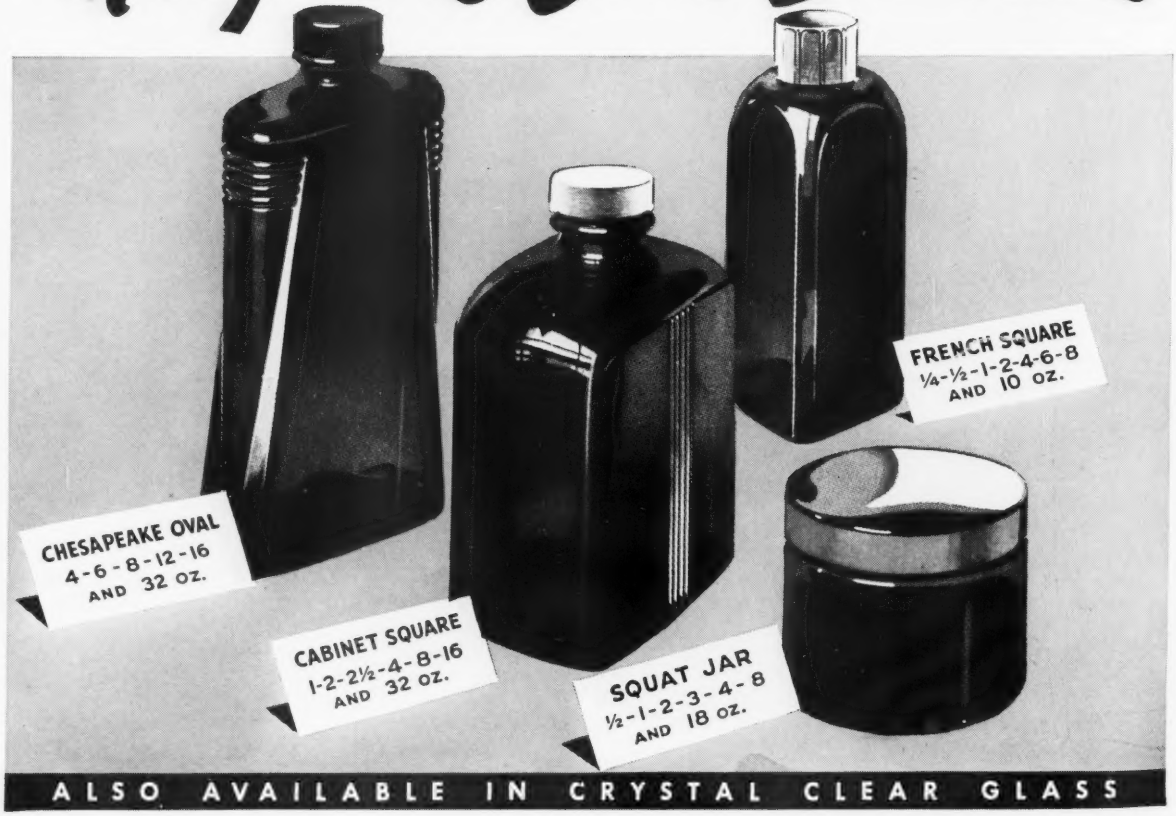
COLORS speak a language of their own. It is not by chance that, in our spoken language, such terms as *true-blue, blue-book* and *blue-blooded* have come to mean so much. In the eyes of mankind, blue has always been a synonym for character, integrity, high rank, prestige. . . . . Let the true blue of Maryland Blue Glass speak for the honest quality of your product. Blue builds confidence—and confidence builds sales.

SEND FOR SAMPLES

of any of the designs pictured on this page. Or write for the portfolio of "True Blue Packaging"—showing more of the latest stock designs in Maryland Blue Bottles and Jars.

MARYLAND GLASS CORPORATION, BALTIMORE, MARYLAND
New York Representative: . . . . . 270 Broadway, New York
Chicago Representative: . . . . . 526 W. 18th St., Chicago
Pacific Coast: . . Owens-Illinois Pacific Coast Co., San Francisco

Pack to attract in *Maryland Blue Bottles*



ALSO AVAILABLE IN CRYSTAL CLEAR GLASS

LEGAL ANGLES

By S. L. MAYHAM

WHAT PRICE STIPULATIONS?

A good many people have been studying with varying degrees of concern the recommendations on labeling issued by the Toilet Goods Association after the conclusion of its agreement with the National Retail Dry Goods Association on protection against damages arising out of unwarranted claims for cosmetics. Of course the whole industry will study anything and consider anything at the moment which is calculated to keep it out of trouble with the Department of Agriculture under the new Food, Drug and Cosmetic Act and the Federal Trade Commission under the Wheeler-Lea Act. It is quite right that such studies should be made and utterly wrong that unfounded and ridiculous claims should be made for cosmetics, or, indeed, that they ever should have been made in the first place. To that extent the suggestions of the Board of Standards of the T.G.A. are most useful and likely to be most valuable.

However, I wonder just how many individuals in the industry or out of it have compared these cautions with the list of stipulations entered into between cosmetic manufacturers and the Federal Trade Commission in the last two or three years. Such a study is a little more than entertaining. It is quite instructive as to the origin of the suggested cautions, or many of them. The Board of Standards had nothing much to do with drafting these cautions other than to confer with the authorities and find out what could be said and what could not without bringing complaint and citation. It has not formally approved the stand of the authorities on them and informally, I hear, it has questioned the validity of more than one. It appears, however, that the whole industry is likely to be cramped by some quite questionable rules largely because some manufacturers who have entered stipulations were either very vulnerable or somewhat reluctant to fight when a good fight would have helped. All of these stipulations are, to say the least, informal precedents for future actions by the Commission and, perhaps, the Food and Drug Administration as well. Those who entered unwarranted and illogical ones have certainly done the industry and themselves no service and have hurt their own cause in case they are cited further for other imaginary infringements of the laws of good business.

RATHER FOOLISH CAUTIONS

Sticking, to perhaps boresome length, on this same subject, it seems that quite a few of the cautions approved inferrentially by the Board of Standards, although not actually accepted by that body, are quite beyond the bounds of good sense or law. Regardless of anything which may have issued from any source, I don't think any manufacturer ought to withdraw the statement that his powder "does not clog the pores." I am no expert on anatomy or physiology of the skin, but since I read this "caution" I have read a little on the subject and consulted one or two pretty eminent experts. From this reading and their comments, I don't believe that face powder can clog the pores and that applies to any and all brands. The skin, according to the experts, just isn't made so a face powder can clog the pores.

Even if the pores could be clogged by powder, it is quite illogical to say "powder can clog them by getting in, but cream or lotion can't cleanse them because it can't get in." Such statements just don't make sense and I can't see how a case based on them could be successfully carried through the courts.

I think a case could be made in defense of a claim that a preparation will remove blackheads. I've seen it done by a competent operator using a very simple and well-known preparation. Maybe the cure wasn't permanent but then, quinine is no permanent cure for malaria nor arsphenamine for syphilis.

And there are a few other rules, or cautions, or "non acceptables" which the industry certainly shouldn't accept as such without at least testing the matter out. Most of us don't want any unjustifiable claims made for any products, but I hope there are still a few in the industry who do want to make *justifiable* claims regardless of what the authorities in Washington may happen to think at the moment.

The Board of Standards has done excellent work thus far. It has clarified the situation with regard to what Washington thinks is acceptable and what Washington will fight about. Modestly, I should like to suggest that it now turn its attention to what the industry can and cannot substantiate in the way of cosmetic claims and then go about convincing Washington of its obvious errors on quite a few points. If that convincing fails, and I don't think it will completely, the industry as a whole ought to finance the test cases which will clarify these points under the law and not under some air picked rules which the enforcement officials would like to see, more or less illegally, in effect.

A.M.A. VERSUS ENDOCREME

Dr. Fishbein wouldn't come to town to be served so Endocreme had to go to Chicago to bring suit. When it went, it went with a vengeance, and the original million dollar suit has now grown to several totalling three million dollars, quite a tidy sum indeed. The new suits are in Federal District Court and are brought under the anti-trust statutes. They claim specific damages in the extent of $1,000,000 which is not an excessive figure when the rush of Endocreme to success is taken into consideration. The three million figure comes under the triple damage provisions of the anti-trust laws. Triple damages actually have been assessed and collected in several instances. The suits claim conspiracy on the part of the American Medical Association, Dr. Morris

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Fishbein, several employees and officials of the Association and others, not parties to the instant case, among them officials of State Medical Associations. The conspiracy is alleged to have been along the lines of ruining the business of the plaintiffs in each of several ways but notably by publishing material containing attacks upon the product, Endocreme.

The Court has already issued a temporary injunction against the defendants forbidding them to mention Endocreme or its manufacturer in their publications. This, however, should not be construed as a victory for Endocreme since such injunctions are quite usual in cases involving printed attacks and are issued by the Courts merely to prevent further possible damage while the cases are pending or in process of trial.

When the case actually comes to trial, which should not be too far in the future, I hope the Editor will send me to cover it for him. I want to see Dr. Fishbein on the stand under the cross examination of plaintiff's attorney, Max Steuer. That would be worth many times the cost of a trip to Chicago or points much farther removed from the editorial offices.

NEW DRUGS FOR OLD

Mr. Campbell may be off on the right foot when he states quite emphatically that the "new drug" provisions of the new Food, Drug and Cosmetic Act are "personal" rather than "product" provisions and that he will move to enforce them against persons who have not had previous experience with a "new drug" even if someone else has had experience with it. You can read the law either way you wish, and, quite naturally, Mr. Campbell chose the hard way. That seems to be the trouble with the whole "new drug" provision. You can read it any way you like. To some of us, it makes very little real sense no matter how it is read. That's a pity for everyone excepting attorneys and courts. They will have a field day on it until decisions finally clarify all the tortuous meanings in that complicated language, and that won't be for many a long day.

EXCISE TAXES AND BUDGETS

The campaign for repeal of the excise tax on cosmetics at the next session of Congress is continuing and some very good work has been done in a quiet way. The campaign itself is in good hands, better than at any time in the past, and there is some small chance of success. Cosmetics are about the only things which still suffer heavily from this peculiarly obnoxious form of taxation. There isn't any fairness in the situation and, had the question of fairness alone been involved, we might have gotten rid of the tax, no matter how badly we bungled our efforts. If the tax does not come off, or at least come down materially, at the next session of Congress, only two things can be blamed. One is wholly outside the control of the industry. It is the question of where the money is to come from to meet the heavy Federal budget. You, perhaps, would like to see the budget reduced, but that isn't likely to happen, no matter what any industry may do. Since we have it, we have to reconcile ourselves to raising money to meet it, so far as that is possible under present conditions. Repealing taxes, even if they produce only $20,000,000 or so is not meeting the budget by taxation. The other *is* within the control of the industry and must bear part of the onus if the present campaign fails. That is the fact that the industry still completely fails to attempt to make the consumer "cosmetic tax conscious." That would be the one sure fire method, bound to succeed, if not next year, in the near future. However, manufacturers are afraid to try it, as they are afraid to do a good many very healthy things. As for what is being done, I can only report that it is very good work, the details of which will be disclosed at the appropriate time. Undoubtedly much good will come of it, but I still believe that it would have a much better chance of success if every manufacturer told every retail consumer, "There is a heavy Federal Tax on cosmetics, and you, dear lady, are paying it, whether you know it or not!"

DRUG OR COSMETIC?

There are a lot of puzzles in this new drug law which probably won't come up for quite a long time. One which is likely to come up sooner than most others is the question of when a "cosmetic" becomes a "drug" and what happens to it after that. If you make cosmetics, better be very careful not to recommend them for diseased or abnormal conditions. Better be just as careful not to put medicinal ingredients in and tell your dear public that they are there. If you do, it's pretty sure that your product is a "drug" although it may be a "cosmetic" at the same time. That means you'll have to state the nature of all active ingredients on your label and you will be in something of a mess.

Then too, we have that curious drug definition which talks about affecting "the structure or any function" of the body and would make a lot of cosmetics automatically drugs without any claims whatever, but officials are likely to postpone any very heavy blows on that point. They have troubles enough without it.

RAW MATERIALS AND THE LAW

Several cosmetic manufacturers have asked guarantees from suppliers of raw materials that their wares will come up to the requirements of the new Food, Drug and Cosmetic law. I'm now referring to cosmetic manufacturers and cosmetic raw materials. That has put suppliers into something of a dither. They're afraid to guarantee and afraid not to guarantee so they are back pedaling and trying to get their breath while they figure out what to do. Now this provision of the law needn't have been there at all had the raw material people not scoffed at suggestions made to them a long while ago to the effect that it might rise to plague them later. Nobody cared very much whether it was in or not and a few words in the proper ear would have spiked it. This is cited to show the need for better co-operation and closer working together of the raw material people. No group needs co-operative work more at the present juncture and very few seem more reluctant to engage in it. That's bad for the raw material industries and worse still for the cosmetic manufacturers who can't take care of all these matters in addition to what they already have to do. But, perhaps a few citations and a few fines will have a salutary effect when the Department gets around to it.

MAYBELLINE AND TAXES

And speaking of taxes, as I do almost every month, the evidence is in the Maybelline case which involves the payment of taxes on cosmetics made at private brand. The government holds that the person who has his identifying marks affixed to such cosmetics is the manufacturer and the tax payer. Maybelline showed that it had no connection with the house that made its goods, that it merely bought certain cosmetics from that house and didn't control formula, manufacturing process or anything else but the trademark. And that is the crux of the whole case. Precedents were cited on both sides and the government made good—or bad—use of the Bourjois and Inecto decisions, depending upon the point of view. The judge has the case for decision and when a suit is in that position, comment is inappropriate and at times dangerous. When the decision comes down, I'll try to analyze it and show what the main points are likely to be on appeal. Both sides have said they would appeal if they lost, of course, quite unofficially and informally.

THE STATE OF TRADE

Business indices have picked up remarkably in the last month although the threat of war abroad has stifled the gain to a certain extent. But store sales are still a good way below the levels of last year. Sun tan makers complain a little that their season was not up to expectations. The explanation is doubtless in the multiplicity of products offered for the purpose as against the comparative few which were on the market a year ago and the even fewer in 1936. General cosmetic sales have been pretty good but high priced lines are not too hot in their sales charts. One big house which put on a discount sale reports it a tremendous success.

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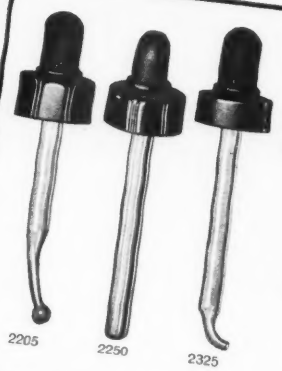

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ALCOHOL NEWS

September ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1938

Pancreas-Derived Substance Controls Metabolism Of Fat

CHICAGO, Ill.—A patent which may open a new chapter in insulin therapy has just been issued to three inventors here. It tells of the preparation from pancreas of a substance which, although associated with insulin, apparently has a specific function of its own—that of controlling fat metabolism.

At least, fatty infiltration and degeneration of the liver in diabetics can be prevented if parenteral administration of insulin is augmented with oral doses of the substance, assert the inventors in describing a series of experiments with completely depancreatized dogs. Also, when degeneration and infiltration have already occurred, doses of the substance can reverse the degenerative process, they claim.

Extracted With Alcohol

To obtain the substance, the patent papers suggest extracting fresh, finely minced pancreas with two volumes of 95% ethyl alcohol acidulated to a pH of about 4, allowing the alcohol to stand on the pancreas for about 5 to 6 hours with stirring, and then decanting or filtering. Water in the pancreas makes the effective alcohol concentration about 60%, it is claimed.

Specific Hormone

The filtrates obtained, the patent continues, are evaporated to dryness without the use of heat, and the solid residue extracted with a fat solvent such as ether. What remains is substantially the fat-metabolism-controlling principle plus incidental amounts of insulin and traces of lecithin and choline, which may be further purified. The inventors believe the product is a specific hormone.

Effective daily oral doses (for dogs) range from 750 mg. to 2500 mg., the patent papers reveal.

Ultrasonic Waves Reduce Viscosity of Solutions

LONDON, England—Ultrasonic waves reduce the viscosities of aqueous solutions of gum tragacanth, gum arabic, gelatin, agar, sodium stearate and others, but the mechanism of viscosity reduction is not the same in all cases, investigators of the Faraday Society announce here in reporting studies on colloidal solutions.

In gums and sodium stearate it is thought the collapse of cavities formed during the transmission of ultrasonic energy, is the determining factor in viscosity reduction. With gelatin and agar solutions, however, the investigators believe this reduction is due only partly to the collapse of cavities. Viscosity reductions in sodium stearate solutions are accompanied by the appearance of rod-shaped particles and the disappearance of the background of small particles, they note.

Viscosities are of the anomalous or structural type, usually associated with solutions of high viscosity and low colloid content, it is claimed.

Resins Clean Teeth

PARIS, France—Powdered synthetic resins are suggested as mechanical cleaning agents for dentifrices in a patent granted here. Urea-formaldehyde resin is cited as an example.

Preserves Color Of Fruits

YONKERS, N. Y.—Peeled apples, sliced potatoes, pears, bananas, figs and other foods will not turn color, even after weeks of exposure, if they are dipped in thiocarbamide, it is claimed in a patent granted here. The thiocarbamide apparently prevents oxygen from acting on the cut surfaces and, in the small quantities used (about one tenth of 1%), is said to be tasteless.

Give Clue to Mechanism Of Sulfanilamide Action

By activating the system of cells which destroy micro-organisms or harmful cells, sulfanilmade "steps up" the phagocytic power of the body, report three University of Tennessee experimenters. How and why sulfanilmade acts has been somewhat a mystery, Drs. H. A. Davis, L. C. Harris, Jr., and H. C. Schmeisser state, since it has not shown much bactericidal power in vitro.

This new clue to the action of medical science's potent but puzzling weapon was revealed by studying the tissues of white rats injected daily with the chemical over a period of three months.

Among the cells which are believed to protect the body from foreign material, including disease germs, by enveloping and destroying the invading bacterial cells, are those of the spleen, liver, lymphoid tissue and the macrophages of the general tissues of the body.

New Beverage Sterilizer Preserves Flavor, Sparkle

BRUSSELS, Belgium—A new filter for sterilizing heat-sensitive liquids at low or moderate temperatures is described in a German patent recently acquired by an inventor here. The liquid is filtered through a series of membranes with progressively smaller perforations, the patent reveals.

These membranes are made by coating a fabric with cellulose acetate or other cellulose ester and perforating with calibrated needles. For the very small pores, the perforated membrane is re-coated with cellulose ester.

The filter is supported by a plate which has fine circular or spiral grooves, with drain holes through which the filtrate escapes.

Beverages sterilized in this filter are said to retain their freshness, flavor and sparkle.

Drug, Chemical Mfrs. *To Meet Oct. 21 and 22*

The Drug, Chemical and Allied Trades Section of the New York Board of Trade will hold its Third Annual Fall Meeting and Golf Tournament on October 21st and 22nd, *1938. Complete details of the busi*ness and recreational activities are to be announced later. The meeting will be held at the Skytop Club, Skytop, Pennsylvania.

N.F. Chemists Offer Revised Formula For Liq. Antisepticus

Claim Increased Antiseptic Power; More Pleasant Taste

WASHINGTON, D. C.—A new formula for Liquor Antisepticus N.F., more highly antiseptic than the present solution, more pleasant in taste, and easier to compound is offered by Dr. E. N. Gathercoal and associates of the National Formulary Laboratory in a recent issue of the *Journal of the American Pharmaceutical Ass'n.* The new formula differs principally in the proportions of certain of the ingredients and is said to kill the test organism in one minute instead of five minutes as allowed by the test.

Alcohol Content Differs

Previously established incompatibilities of chlorthymol with eucalyptol, resulting in precipitation, caused Dr. Gathercoal to consider a downward revision of the proportion of these ingredients as well as of thymol, menthol, methyl salicylate, and oil of thyme. In the proposed formula, reductions are as shown by the following comparison:

	N.F. VI	Proposed
Boric acid	25.0	25.0 g.
Thymol	1.0	0.5 g.
Chlorthymol	1.0	0.5 g.
Menthol	1.0	0.5 g.
Methyl salicylate	1.2	0.2 cc.
Eucalyptol	2.0	0.1 cc.
Oil of thyme	0.3	0.01 cc.
Alcohol		300.0 cc.
Water, q.s.		1000.0 cc.
Alcohol, Water	equal quantities, q.s. 1000.0	

Directions for preparing the new formula are given in the report, although it is not stated if this new formula will officially replace the present N.F. VI formula.

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Alcoholic Preparations Of Iodine and Quinine Absorbed Best By Skin

ZURICH, Switzerland—If alcoholic preparations of iodine and quinine are applied to the skin, measurably amounts of the drugs are absorbed and may later be detected in the urine, it was advanced by Dr. A. Richard Bliss, attending the XVIth International Physiological Congress here.

In experiments conducted over the past seven years, Dr. Bliss found methyl salicylate to be absorbed most rapidly and in greatest quantity regardless of the vehicles; iodine and quinine were absorbed best in alcoholic vehicles, while aqueous solutions of iodine, fatty and oily preparations of potassium iodide and quinine were not absorbed in detectable quantities.

Of interest in connection with the above dispatch, is a study on the obsorption of alcohol through the skin made by Dr. David I. Macht. In the Journal of the A.M.A., Dr. Macht reports the following experiment and its results: Two small children were given eight minute alcohol rubs while attached to a basal metabolism machine (which eliminated the possibility of inhaling the alcohol). That definite absorption of alcohol occurred was demonstrated by a maximum alcohol concentration in the urine of 0.025%.

Air Enriched With CO_2 Improves Plant Growth

WASHINGTON, D. C.—Increasing the carbon dioxide content of the air improves plant growth, according to a recent lecture by Earl S. Johnston of the Smithsonian Institute. The author points out that increased light intensity is only effective up to a certain value, because the carbon dioxide naturally present in the air is not equal to that required during the accelerated photosynthesis.

It was shown in experiments on wheat that air enriched with carbon dioxide to about four times that of normal air "(1) increased the tillering of wheat, (2) greatly increased the weight of straw, increased (3) the number and (4) weight of heads, (5) increased the number of grains produced, and (6) slightly delayed the time of heading."

"The practical application of aerial fertilization with carbon dioxide and the source of supply of carbon dioxide in sufficient amounts for field work are still unsolved problems," the author concludes. "Its application to greenhouse culture appears to be more promising."

A tincture containing 2% iodine and 2.4% of potassium iodide in 50% alcohol is of higher antiseptic value and less irritating than the official 10% tincture, it is reported by Ricci and Daurat writing in a recent issue of **Revista Farmaceutica.**

Credit Acetic Acid With Toxic Effect On Molds

Acetic and other innocuous fatty acids of this series have a remarkable toxic effect upon the growth of bread molds, it is revealed in a recent article. The pH must be kept low, however, since at pH values from 5.5 to 6.0 the acids have only a slight effect, the authors warn. It is believed that successful application of the principle to other than food or bakers' products is possible.

Production And Sale Of Food Dyes Up During '37

U. S. production and sales of food dyes registered slight gains during 1937 as compared with 1936, data compiled by the Tariff Commission reveals. While production went up 4.5% and sales 1.8%, the value of the sales, however, declined 3.0% to $1,160,244. World Trade Notes reports.

Data on Ponceau 3R and Brilliant blue FCF is incomplete. Sales figures for five other food dyes are given as follows:

	1936		1937	
	Pounds	Value	Pounds	Value
Orange I	86,546	$185,901	86,684	$191,517
Amaranth	91,836	225,689	108,230	262,785
Tartrazine	92,254	229,228	97,066	241,105
Erythrosine	7,709	113,149	7,182	100,117
Sunset yellow FCF	30,072	71,684	34,942	82,167
Total Food Dyes	**398,427**	**1,194,371**	**405,104**	**1,160,244**

Dry Enzyme Preparations Extracted With Acetone

LONDON, England—A new method of obtaining dry enzyme preparations from animal pancreas, together with protective colloids, is revealed in a recent patent granted here.

The method is given essentially as follows: Pulped entire animal glands are extracted with anhydrous acetone or anhydrous azeotropic mixtures containing acetone. Following extraction, water and extracted substances are freed from solvent by reflux distillation, after which the solvent is recycled until the pulp is dehydrated and defatted and recovered from the residual solvent.

Addition of neutral salts to the extract is said to precipitate substances of the nature of protective colloids which may be added in liquid or solid form to the dry gland or its aqueous preparations.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

Super-ammoniated fatty acid soaps with many special applications as water repellants, emulsifying agents and detergents have been introduced, according to a recent announcement. They are available as pastes which disperse in water and dissolve in alcohol, the manufacturer states. **(No. 131a)**

U S I

A synthetic base for fly sprays described as non-toxic to humans and non-staining on fabrics and paper, is now on the market. The product replaces many times its weight of pyrethrum flowers now imported for use in insectides, a recent announcement asserted. **(No. 132a)**

U S I

An ink reodorant with a definite fruity note has been developed for applications where a perfume odor would be objectionable, according to a recent announcement. The manufacturer recommends it for use in inks for paper napkins, doilies, and food wrappers. **(No. 133a)**

U S I

A new type of cap for medicine bottles indicates the time when the next dose should be taken. A tiny steel ball can be moved in a ribbed groove to mark any hour or half hour. **(No. 134a)**

U S I

New monochromatic filters for isolating the prominent lines of the mercury spectrum at wave lengths 365, 405, 436, 546, 578 and 1014mu are said to be far superior to any previously available. Exceedingly high transmission can be had with purity factors from 90 to 99%, the manufacturer reports. **(No. 135a)**

U S I

New wetting agents for soapless, foaming-type shampoo were announced recently. The complete series can be used in the manufacture of such shampoo at a dollar a gallon or less, it is reported. **(No. 136a)**

U S I

Positive sterilization of barbers' instruments is claimed for a new patented sterilizer. The unit is composed of five compartments, according to a recent announcement, for the styptic solution and applicator; razor and shears; combs; brush; and clipper. **(No. 137a)**

U S I

A new water-white belt dressing said to be particularly applicable to the food, creamery, textile, etc., industries is now on the market. The manufacturer states that the dressing has neutral characteristics and contains only ingredients which pass U.S.P. standards. **(No. 138a)**

U S I

Carboy drainers designed to prevent accidents caused by splashing and carelessness in pouring are now available in three sizes—5 gallon, standard and large — a recent announcement states. One user writes that the installation of a Carboy swing or rack ordinarily required by insurance regulations is not necessary when these drainers are used. **(No. 139a)**

U S I

For measuring particle sizes below 325 mesh (44 microns), the device at left affords amazing accuracy as well as speed and ease of manipulation with low first cost, a recent announcement states. This particle sizes gives accurate results in about two hours from representative samples of less than five grams, the manufacturer maintains. **(No. 140a)**

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NEWS

People

Mulster Celebrates Anniversary

Daniel J. Mulster, treasurer of the House of 4711, completed his forty-ninth year of service with the firm August 8. He has always been prominent in the toilet goods business, having taken active part in the program of the Toilet Goods' Association. He is now a member of the executive board of that association.

Philip Smith to Sail for Australia

Yardley of London is planning to start manufacture in Sydney, Australia beginning early next year. Philip Smith, son of Cecil Smith, president of Yardley & Co., New York, will sail from San Francisco in October to formulate plans, organize and manage a new unit in that part of the world. He was connected with the Yardley organization in London for five years and has been working with the New York branch for the past two years.

Dr. Hodgson Joins Agency

Dr. Michael A. Hodgson, formerly with the Food and Drug Division of the Department of Agriculture has been appointed medical director of Lake-Spiro-Cohn, Inc., advertising agency of Memphis, Tenn. Dr. Hodgson's practical knowledge enables the agency to supply expert counsel on the subjects of copy claims, package, label and carton requirements; booklets, folders and other forms of collateral advertising.

Restricts Wearing of Shorts

Mayor Luis de Hoyos of Monticello, N. Y., who objects to women wearing shorts on Monticello's main street has issued a proclamation banning the garments for all but "mothers and ladies of comparable age whose discretion the years have ripened." Mr. de Hoyos is president of Synfleur Laboratories.

Ungerer and Voorhees Abroad

Frederick H. Ungerer, president of Ungerer & Co., and Kenneth G. Voorhees vice-president of the firm sailed September 10 aboard the Rex for a six weeks trip through Europe. They will visit with their principals abroad and will spend most of their time in Italy, France, and England.

FREDERICK H. UNGERER

KENNETH G. VOORHEES

The principals which Ungerer & Co. represents in this country and with whom Mr. Ungerer and Mr. Voorhees will visit, are: Charabot & Co., France; Botu D. Pappazoglou, Ltd., Bulgaria; S. & G. De Pasquale, Italy; Molino Copperossi, Italy; and Stafford, Allen & Sons, England.

Coyle in Fritzsche 25 Year Club

Thomas Coyle has been made a member of Fritzsche Brothers' Quarter of a Century Club. The twenty-fifth anniversary of his association with the company was celebrated July 29 at a luncheon held at Charles' Restaurant, New York. The company's executives presented him with a substantial government bond and his fellow employees gave him a gold wrist watch.

The other members of the club which now numbers ten are: F. H. Leonhardt, president of the company, Mary Neary, Mae Caufield, Ralph R. Redanz, Francis Riley, Robert Waugh, Wm. A. Welcke, George L. Ringel and Ben F. Zimmer.

Roy Herman Joins Revlon

Roy Herman of Chicago has joined the sales staff of the Revlon Nail E n a m e l Corp., New York. Mr. Herman, who is well known in the cosmetic field, will be in charge of sales for Revlon in New York City, Westchester and Long Island.

Gregory Thomas Abroad

H. Gregory Thomas, director of the Board of Standards of the Toilet Goods' Association and managing director of Perfumery & Cosmetic Exhibits, Inc., sailed for Europe on the SS "Normandie" September 1.

Frank Whitney Hyat

Paul Hyat of Brass Goods Mfg. Co., Brooklyn, N. Y., has announced the birth of a son early in August. The boy has been named, Frank Whitney Hyat.

Holly Eleanor Harrison

J. G. Harrison, formerly of Harrison Refining Co., and prior to that of the Barium Reduction Co., is the proud father of a daughter, Holly Eleanor Harrison, born to Mrs. Harrison September 6.

THE BUZZ!

THAT MEANS BUSINESS ••

Buzz your secretary and ask her to write us . . . or call us on the phone • What will be the result? • Business for you • We mean business when we say our *service* will prove the last word in helpfulness to you. It is the outgrowth of two-thirds of a century of research and untiring effort to bring you the latest developments in the container industry • Owens-Illinois *containers* mean business for you, also. They do more than just contain—they SELL. They are *real sales*packages • Buzz Owens-Illinois for help in solving problems of containers, closures, labels and cartons. . . Owens-Illinois Glass Company, Toledo, Ohio. Branch offices in most principal cities.

•• OWENS·ILLINOIS

"First in Glass"

Merkel Joins Lueders

Kenneth W. Merkel has been appointed director of the perfume laboratory of George Lueders & Co., New York essential oil house. Mr. Merkel brings to Lueders a wide and varied experience. For five years he was associated in the manufacture of cosmetics and for the past seven years

KENNETH W. MERKEL

directly with the essential oil business, both as perfumer and sales manager.

Mr. Merkel's new connection with George Lueders & Co. offers opportunities through the contemplated expansion of their compound business. Plans for the perfume laboratory are still in the development stage but are of a nature such as to give adequate opportunity to Mr. Merkel's ability. Mr. Merkel will also call directly on the perfume trade and his many friends may shortly expect a visit.

George Mennen Marries

George Mennen, son of William G. Mennen, president of the Mennen Co., Jersey City, was married at Alkton, Md. on August 16 to Miss Mary Elizabeth Maloney.

Dorothy Louise Leonhardt Engaged

Mr. and Mrs. Frederick H. Leonhardt, Douglaston, N. Y., have announced the engagement of their daughter, Dorothy Louise, to Dr. Edward Stroh, Jr., New York. Mr. Leonhardt is the president of Fritzsche Brothers, Inc., New York.

Two New Books by Dunn

The following companion books have been announced for publication on or about October 1st: "Federal Food, Drug, And Cosmetic Act" and "Wheeler-Lea Act." Each book contains a comprehensive statement of the legislative record of the act and a comprehensive subject index of it, prepared by Charles Wesley Dunn of New York Bar. They are authoritative sources of information on the development of the acts and their intendments. Prices are $6.00 and $4.00 respectively or both may be purchased at a combined price of $8.00.

Commercial Solvents Advances Sliger

Herbert Sliger has been appointed eastern sales manager of Commercial Solvents Corp. Mr. Sliger has been associated with the company since 1927. In 1930 he became manager of the Cleveland branch and in 1937 he was made New York district sales manager.

Kramer to Coast

Robert A. Kramer of the Th. Goldschmidt Corp., is on another of his all-air trips to the coast. He left on August 28 to be gone about four weeks and is including Salt Lake City, Seattle, Portland, San Francisco and Los Angeles in his itinerary.

Gillepsie Joins Mennen

H. B. Gillepsie has joined the Mennen Co., Newark. He will be assistant sales manager.

Vera Lamprecht Joins Liggett

Vera Lamprecht, formerly advertising manager for Standard Drug Co., Cleveland, has been appointed advertising manager of Liggett Drug Co., New York.

Bezard Back from Vacation

Louis Bezard, purchasing agent for Houbigant, Inc., returned from several months vacation in Europe on the S. S. Paris, August 23.

Companies

Noxzema Names Junior Board

George E. Bunting, president of Noxzema Chemical Co., Baltimore, presided at a meeting held at the Emerson Hotel Baltimore, August 11, at which a junior board, composed of seven department heads of the company was set up. The plan, which is modeled on the plan of internal administration used by McCormick & Co., is intended to give the department heads an opportunity to exchange ideas and make suggestions. George L. Bunting, vice-president of the company, was made chairman of the junior board.

Colgate Buys Goodwin

The plant and business of G. W. Goodwin & Sons, Manchester, England, have been purchased by an English affiliate of Colgate-Palmolive-Peet Co., Jersey City, N. J. After modernization the plant, in addition to manufacturing Goodwin products, will manufacture soap supplementing the supply of Colgate soap now imported from Canada.

Endocreme Restrains A.M.A.

A federal court in Chicago has issued an order temporarily restraining the American Medical Association from publishing any statement, referring directly or indirectly, to Endocreme.

Hirestra Laboratories, manufacturer of Endocreme, brought the motion for the injunction at the time that a $3,000,000 damage suit, charging conspiracy and libel, was filed against the association in Chicago.

These actions followed a similar suit for $1,000,000 filed in the New York courts in May. The defendants did not accept service in New York and the complainants moved to the Chicago courts in order to forestall further delay.

Snideman Heads Amer. Coating

At a recent meeting of the board of directors of American Coating Mills, Inc., Elkhart, Ind., R. L. Snideman was elected president, succeeding Charles C. Colbert who was made chairman of the board. L. C. Daly, production manager of the company, was elected vice-president in charge of production and C. W. Dunnington was re-elected secretary and treasurer.

Mr. Colbert has spent more than forty years in the paperboard industry. He organized the American Coating Mills and later moved it to Elkhart from Wabash and is the originator of the continuous coating process used by the company. Mr. Colbert will continue to have charge of research work and promotion of new developments.

Prior to his election as president, Mr Snideman served as vice-president of the company.

Lilly Advances Ruedig

Dale F. Ruedig, west central division manager for Eli Lilly & Co., Indianapolis, with headquarters at Kansas City, Mo., has been transferred to the Chicago office where he will succeed William McGibbon, who was forced to resign because of ill health.

The west central division, which Mr. Ruedig had charge of and the northwestern division which was under the direction of Mr. McGibbon have been consolidated and Mr. Ruedig becomes head of the newly formed west central division, with headquarters in Chicago.

Owens Expands in Chicago

Owens-Illinois Can Co., has leased space in the building at 6501 W. Sixty-fifth st., Chicago, adjoining the company's present building. This makes available 102,000 square feet of additional space.

Stearns Protects Mark

Frederick Stearns & Co., Detroit, manufacturer of perfumes, toilet waters and face powders under the trade name "Eterno" has successfully opposed the registration of similar trade names by two other companies.

America's "No. 1" OIL OF ORANGE

Compare this orange oil with any high grade oil and you will know why Exchange *Cold Pressed* Oil of Orange, U. S. P. is in such great demand. Ask our jobbers for sample and compare quality and price.

COLD PRESSED, U. S. P.

Sold to the American market exclusively through:

DODGE & OLCOTT COMPANY
180 VARICK STREET, NEW YORK CITY

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FRITZSCHE BROTHERS, INC.
76 NINTH AVENUE, NEW YORK CITY

Distributors for: California Fruit Growers Exchange, Products Department, Ontario, California
Producing Plant: The Exchange Orange Products Company, Ontario, California

Copr. 1938, Products Dept., California Fruit Growers Exchange

Dr. Scott Joins Drug Products

Dr. Winfield Scott Hubbard has become associated with Drug Products Co., Inc., New York, as director of production, control and research.

Dr. Hubbard obtained his Ph.G. at University of Illinois, B.S. degree in chemistry and pharmacy at University of Michigan, M.A. in chemistry and law at Columbia University and Ph.D. in chemistry and pharmacy at University of Wisconsin. He is the author of several scientific papers and has taught food and drug analysis, microscopical examinations of foods and drugs and pharmacy and pharmaceutical arithmetic at the University of Michigan. For several years he served with the Bureau of Chemistry at Washington and later at the New York station.

Mary Pickford Cosmetics

Mary Pickford Cosmetics, Inc., will move about the middle of September to permanent offices at 580 Fifth ave., New York. Miss Pickford, the president of the company, is now making her home in New York and will personally supervise the decorating of the new offices. The Mary Pickford line of cosmetics will be on sale October 1 in department and drug stores.

Merck Ascorbic Acid Book

Another of a series of "Merck Service Bulletins," this one dealing with Ascorbic Acid Merck, has just been mailed to proprietary and pharmaceutical manufacturers by Merck & Co. Inc., Rahway, New Jersey.

This bulletin contains up-to-date information for manufacturers and a summary of recent clinical investigation. It describes the physical characteristics of the product, structural formula, melting point, stability, solubility, etc., gives the specific indications of Ascorbic Acid and discusses its uses in cases of vitamin C deficiency. Copies of the bulletin are available to manufacturers on request.

Meyer Bros. 86th Anniversary

The Meyer Brothers Drug Co., St. Louis, with branches in New Orleans and Little Rock, celebrated its eighty-sixth anniversary on September 12. The company, which is said to be the largest independent wholesale drug house in the country, was founded by Christian F. G. Meyer in Fort Wayne in 1852.

The present officers of the company are: president, Carl F. G. Meyer; vice-presidents, Adolph C. Meyer, Stanley B. Simpson, Carl F. G. Meyer III; treasurer, John C. Vaughan; secretary, Edward P. Schrader; assistant secretary and treasurer, Ewald Habegger. C. A. Iorns is vice-president and manager of the New Orleans house and R. R. Chamberlain is vice-president at Little Rock.

Above is a scene from a fishing trip recently enjoyed by Dr. William Latritz, Secretary of Florasynth Laboratories, and two of Florasynth's Chicago salesmen, De Vere L. McNinch and Thomas E. Flanagan. They were at lake Lac Mille Lac in Deerwood, Minn., with a few of their friends, and one day's catch for six men was 48 wall-eyed pike, weighing about two hundred pounds,—and this is no fish story.

Dow Names Doan V.P.

Leland I. Doan, sales manager of Dow Chemical Co., Midland, Mich., since 1929 has been elected a vice-president of the company.

Mr. Doan was born in North Bend, Neb., and attended the University of Michigan and in 1917 married Ruth Alden Dow. He has been associated with Dow Chemical Co. for twenty-one years.

Anchor Moves in Chicago

The Chicago Office of the Anchor Cap & Closure Corp., formerly located at 1N. Canal St., is now consolidated with that of its parent company, the Anchor Hocking Glass Corp. at 360 N. Michigan Ave. Operating out of this office and representing both of the above companies are G. J. Graham, W. G. Jander, J. E. Bellinger, W. P. Carroll, B. P. Fox and S. R. Nicholson. A. G. Costello and K. K. LeMay are no longer associated with either company.

Sharp & Dohme Strike Settled

The strike of employees of Sharp & Dohme, Inc., Philadelphia, which went into effect July 27 was brought to an end on August 18 when arrangements were made for an arbitration board to conduct an election to determine a collective bargaining agency for the company's 1100 employees.

Solvay Bicarbonate Plant

Solvay Process Co., Syracuse, N. Y., has awarded the contract to the Austin Co. of Cleveland, for the design and construction of a new soda bicarbonate plant. The new plant which will cost approximately $2,500,000 will replace the present soda bicarbonate plant in Syracuse.

New Florasynth List

A new price list—August and September has been issued by Florasynth Laboratories, New York, and is ready for distribution. Copies are available upon request.

Monsanto Moves in Frisco

The San Francisco district offices of Monsanto Chemical Co., St. Louis, have been moved to 100 Bush St. Edward Schuler is manager.

Monsanto Opens in Detroit

G. Lee Camp, vice-president of Monsanto Chemical Co., St. Louis, has announced the establishment of a district office in the Union Guardian Building, Detroit.

H. P. Walmsley, who has been attached to Monsanto's Cleveland office will become Detroit district manager.

Pfaltz & Bauer in California

The name of Pfaltz & Bauer Chemical Co. of California has been changed to McNerney Chemical Co. This change in no way affects the corporate name of Pfaltz & Bauer, Inc., New York.

National Distribution Now

The "Jacqueline Cochran Wings to Beauty" preparations which have previously been sold only in Miss Cochran's beauty salons are now being distributed on a national scale through selected department stores and specialty shops.

Miss Cochran has occupied a preeminent position in the field of aviation since receiving her private pilot's license in 1932. She has been credited with setting six new records and on September 3 she was the winner of the Bendix race.

LANOLIN . . .

for BETTER EMULSIFICATIONS

THE stabilizing influence of B-W Lanolin in creams is amply demonstrated by the following simple test:

The four samples made from absorption base and the individual sample made with B-W Lanolin consist of:

25% basic material
50% mineral oil
25% water

All samples were emulsified on July 9th, 1938 at the same temperature, by the same method, and with the same time of emulsification.

THE RESULTS ARE OBVIOUS!

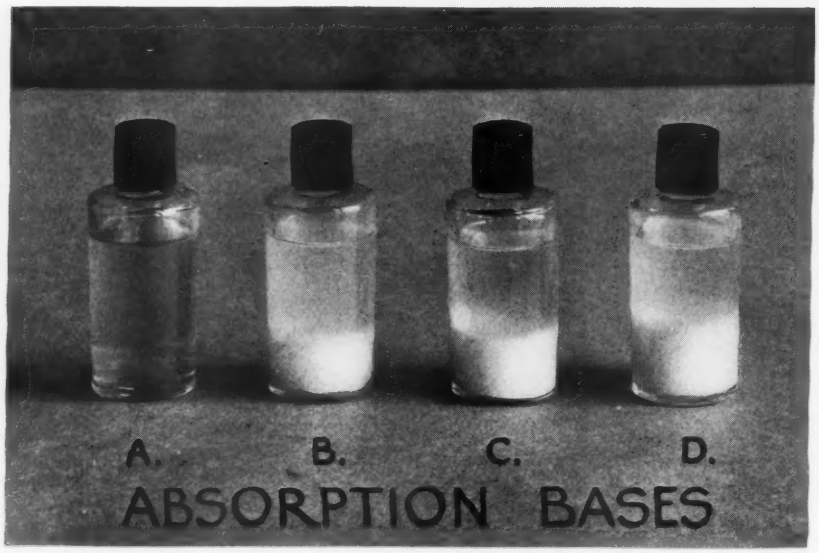
Many emulsifiers will hold either oil or water but only Lanolin will hold both.

Creams made with Lanolin are far less likely to bleed oil than other emulsifiers.

With Lanolin the separation of oil is at a minimum. The absorption base samples tell their own story.

THE CONCLUSION IS EVIDENT!

Use B-W Lanolin for stable creams.



BOPF-WHITTAM CORPORATION

Executive Office
Laboratory and Factory
LINDEN, N. J.

ESTABLISHED 1914

Sales Office
509 Fifth Avenue
NEW YORK, N. Y.

Saunders and Backus Join Searle

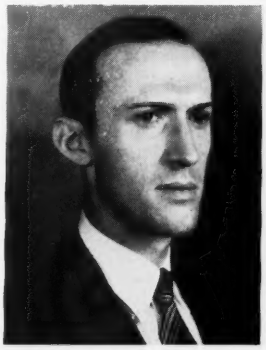
Dr. F. J. Saunders and Harrison S. Backus have been added to the research staff of G. D. Searle & Co., Chicago.

Dr. Saunders received his B. S. in 1933 in animal husbandry and his Ph.D. in 1937 in comparative physiology at the University of California. Since that time

DR. F. J. SAUNDERS

he has been instructor in animal husbandry and junior animal husbandman at the university's experimental station.

Mr. Backus received his B.S. in chemistry in 1933 and his M.S. in chemical engineering in 1935 at the California Institute of Technology. He was connected with the Cutter Laboratories, Berkeley, Calif., in 1934 doing research in the field of



HARRISON S. BACKUS

filterable viruses, and again in 1935 to 1938 when his work entailed engineering development in biological manufacturing methods.

Squibb Research Institute

Organization of the Squibb Institute for Medical Research, in which a staff of scientists assembled from leading institutions of the United States and foreign countries will attack problems involved in the cure of disease and relief of pain, has been announced by E. R. Squibb and Sons. The Institute will be housed in a new laboratory building just constructed at a cost of $750,000 in New Brunswick, N. J.

Dedicated to pure science, the Institute is the first of its kind to be founded in the pharmaceutical industry. The aim is to create in the medical and biological fields an industry-supported research enterprise comparable to the Bell Telephone and General Electric laboratories in the sphere of physics.

Research activity, already under way, has been organized in four main divisions —experimental medicine, pharmacology, bacteriology and virus diseases, and organic chemistry. In addition, the Institute will operate a biochemical laboratory and a medicinal chemistry laboratory. The scientists will continue studies begun in the laboratories with which they were previously associated, and new lines of investigation will be opened up.

Dr. George A. Harrop, formerly associate professor of medicine in Johns Hopkins University and associate physician of Johns Hopkins Hospital, has been appointed director of research in direct charge of the Institute. Dr. Harrop will also head the Division of Experimental Medicine.

Dr. Harry B. Van Dyke will head the Division of Pharmacology. He comes from Peiping Union Medical College in China, where he was professor and head of the department of pharmacology. He was also formerly a professor of pharmacology in the University of Chicago.

Associates in the Division of Pharmacology are Dr. Roy O. Greep, formerly instructor in the biological division of Harvard University, and Dr. B. F. Chow, former associate professor in Peiping Union Medical College, and former member of the department of organic chemistry at Harvard University and at the Rockefeller Institute for Medical Research, New York.

Dr. Geoffrey W. Rake, former research associate in the Connaught Laboratories of Toronto University, heads the Division of Bacteriology and Virus Diseases. Dr. Rake has also been on the staff of the Rockefeller Institute. Associates in this Division are Dr. Arthur E. O. Menzel, previously instructor in biological chemistry in the Columbia University School of Medicine, and Dr. Morris F. Shaffer, formerly assistant in the department of immunology of the School of Public Health of the Harvard University Medical School.

The head of the Division of Organic Chemistry will be Dr. Erhard Fernholz, formerly of the University of Goettingen and Princeton University, and more recently with the research laboratory of Merck and Co. Associates in this Division are Dr. Homer E. Stavely, formerly research fellow in the Sterling Chemistry Laboratory at Yale University, and Harold B. MacPhillamy, a graduate student in the organic chemistry department of Columbia University.

Dr. Hans Jensen, formerly of the Institute of Experimental Biology of the University of California, will be associate in charge of the biochemical laboratory. Dr. Jensen is a former assistant professor of pharmacology at Johns Hopkins, where he cooperated with the late Professor John Jacob Abel in purifying and crystallizing insulin. Dr. Sibylle Tolksdorf, who also has been engaged in research at the Institute of Experimental Biology of the University of California, will be assistant in the biochemical laboratory.

William A. Lott, formerly instructor in chemistry at Rutgers University, will be associate in charge of the Medicinal Chemistry Laboratory. Dr. F. H. Bergeim will be associate, and Dr. D. F. Menard, formerly research chemist at the General Aniline Works, will be assistant in the Medicinal Chemistry Laboratory.

To provide clinical facilities for the research staff, a plan of hospital affiliation is being worked out by the Division of Experimental Medicine. A free ward of fifteen or twenty beds will be maintained for the observation of patients in connection with various problems being studied at the Institute.

Under the direction of the Division of Experimental Medicine, new fellowships in medical schools will be established by the Institute for the study of cancer, syphilis, and hormones. Other fellowships now sponsored by Squibb and Sons will be continued as part of the Institute's program.

The mechanism of surgical shock is among the researches planned by this Division. The value of certain hormone preparations in the treatment of surgical shock is being tested. Another investigation aims to determine the value of vitamin K in checking hemorrhage after operations. Dr. Stefan Ansbacher, formerly research chemist with the Borden Company, has been named associate in the Division and assigned to the vitamin laboratory.

Research on measles, called the second greatest cause of infant mortality, is being undertaken by the Division of Bacteriology and Virus Diseases. The investigation is directed towards the discovery of a small animal susceptible to measles. The only animal now known to yield to the measles virus is the monkey. Since the monkey is expensive to obtain and to maintain, it is explained, investigation would be facilitated if the scientists were to succeed in finding a small animal like the mouse or guinea pig capable of contracting the disease.

The research workers hope to ascertain whether well persons can carry the measles virus in their throats. Dr. Rake and his colleagues are attempting to develop a measles serum that can be standardized to replace the now unstandardized sera. Dr. Rake has already innoculated many monkeys with the measles virus.

The Division of Organic Chemistry is carrying on research concerning the isolation, concentration, and chemical struc-

These two views of the new Lady Esther cosmetic plant in Chicago give an idea of the beauty of the building. Large panels of Insulux glass brick are effectively used by architect Albert Kahn to give a flood of natural diffused daylight throughout the plant.

ture of vitamin K. Another study in progress under direction of Dr. Fernholz in collaboration with Dr. Archie Black deals with the isolation and purification of vitamin B_6, lack of which is related to the occurrence of the chronic disease pellagra. Dr. Fernholz is also collaborating with Dr. Ansbacher on the filtrate factor of vitamin B complex. The Division's program also includes a theoretical investigation in the field of steroids.

The Division of Pharmacology, under Dr. van Dyke, is attempting to isolate and purify some of the hormones of the pituitary body. Dr. van Dyke describes the pituitary gland as the most interesting of the glands of internal secretions because it rules or coordinates the action of all other glands. For the present, the research concerns chiefly the anterior pituitary hormones, which maintain the ovaries and testes.

Another investigation proceeding in the Division of Pharmacology deals with new chemo-therapeutic compounds. This work is being done in collaboration with the Medicinal Chemistry Laboratory and the Division of Bacteriology and Virus Diseases. The Division of Pharmacology will also foster research in the field of synthetic medicinal remedies for the treatment of cardio-vascular diseases.

The entire research program of the Institute, Dr. Harrop pointed out, was determined on the basis of intrinsic scientific interest. "The investigations will not necessarily have an immediate practical purpose in view," he added. "They will be motivated by aims identical with those of investigators in university laboratories and institutes devoted to biological or medical research. Although the primary purpose will be that of pure science, experience in the past has abundantly shown that from just such investigations are most likely to come new discoveries of fundamental significance and practical value.

"The members of the Institute staff have been chosen from the ranks of men distinguished in university research who were attracted by the opportunity to carry on their work under conditions similar to those of the university.

"These men of science will labor in a scientific environment unique among research institutions. With its personnel, laboratory building, and equipment, the Institute is undoubtedly the finest of its kind in the world. The founders confidently look forward to new and durable contributions to the medical and biological sciences and hence to human happiness."

Men of science from all over the country will participate in the dedication of the new laboratory which, it is planned, will take place early in October.

Dr. Harrop was born in Peru, Ill., November 5, 1890, and was graduated from Harvard College in 1912. He received the M.D. degree in 1916 from Johns Hopkins Medical School. From 1916 to 1919 he was instructor in medicine at Johns Hopkins. During 1919-20, he was assistant in physiology at the University of Copenhagen. He was associate in medicine at Columbia from 1921-23, and an associate professor in Peking Union Medical College in 1923-24. In 1924 he became a member of the faculty of internal medicine at Johns Hopkins.

Regulatory

Golden Glint Agrees with F.T.C.

The Golden Glint Co., Inc., Seattle, has entered into a stipulation with the Federal Trade Commission by which it will cease representing that its preparation, designated as Golden Glint, is not a dye, is the only rinse suitable for all shades of hair and assures accuracy in attaining the desired tint.

Jadwiga Signs with F.T.C.

Jadwiga Remedies, Inc., Brooklyn, as the result of an action brought by the Federal Trade Commission, has agreed to discontinue advertising that Jadwiga Hair Tonic or any one of the many Jadwiga shampoos will aid in relieving all scalp conditions; that Krolewskie Lecznicze Wino tones the system; that Flemex is a competent treatment for coughs unless such representation is limited to the relief of coughs due to colds, and that Baby Flemex is an effective remedy for colds unless this claim is confined to such relief as it may afford because of its expectorant properties.

Justice Drug Agrees with F.T.C.

The Justice Drug Co., Greensboro, N. C., has entered into a stipulation with the Federal Trade Commission to cease advertising that Justice Sanitary Lotion is effective in the treatment of tender feet, fever blisters, tetter, pimples, or other skin troubles, and that persons using the preparation "will have no more trouble," or otherwise implying that the lotion will prevent re-infection.

F.T.C. Drops Mary Mauthe Case

The Federal Trade Commission has closed without prejudice its case against Mary Mauthe, trading as Mauthe & Son Remedy Co., Denver. The complaint charged her with making certain misrepresentations in advertising "Radio Active Hair Restorer."

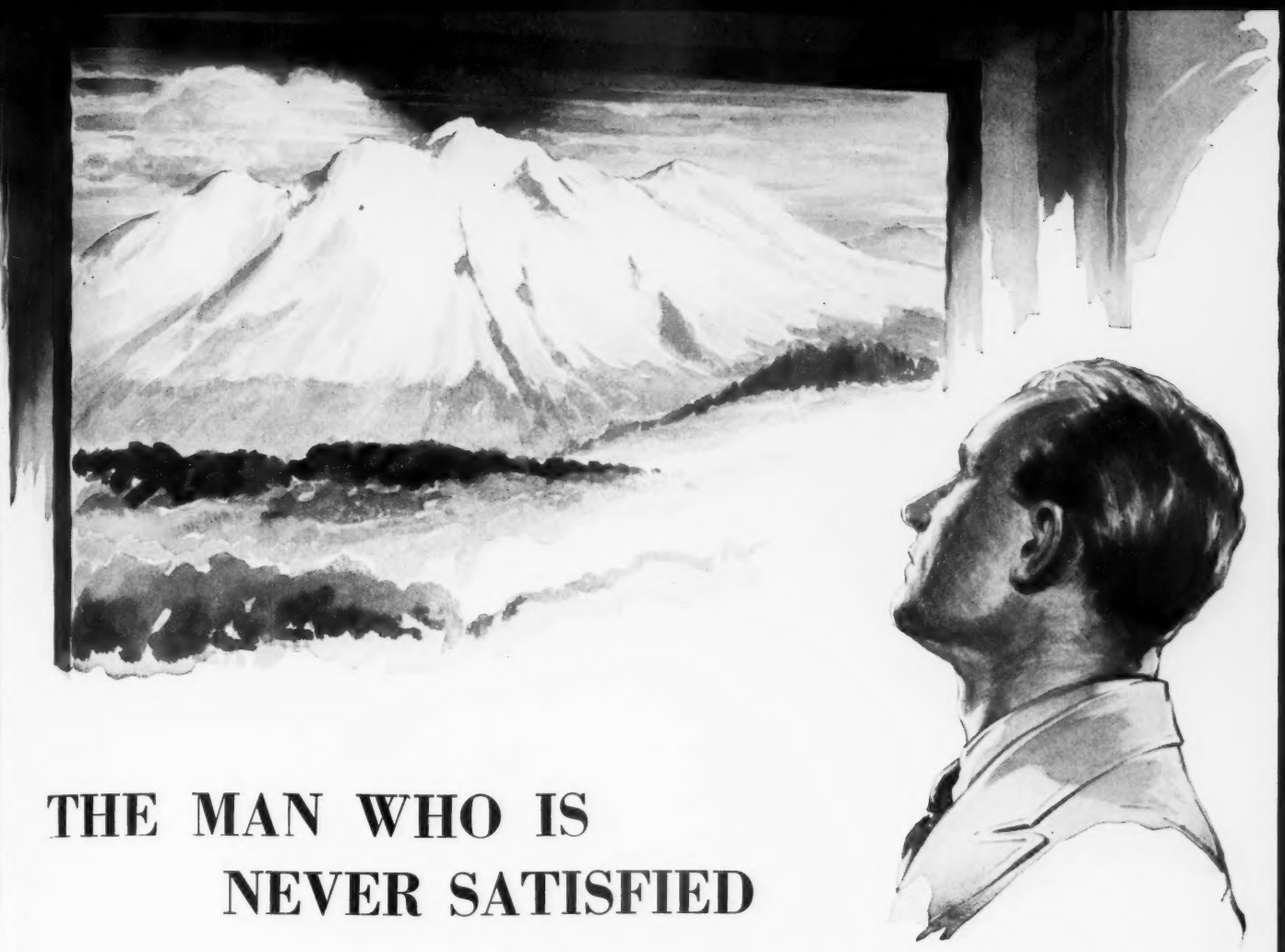
The case was closed because the testimony and evidence adduced at the hearings on the complaint did not show substantial public interest.

Mills Sales Signs with F.T.C.

Mills Sales Co., Chicago, has entered into a stipulation with the Federal Trade Commission concerning its Dupree Vitam-Pecles. The company agrees to cease advertising that the product is a tonic or nerve stimulant; that it contains vitamin EE, and that it is of value in the treatment of sterility, myasthenia gravis, anterior pituitary hormone or lowered basal metabolism.

Norlene Agrees with F.T.C.

Norlene Corp., Los Angeles, and George J. Banta, its vice-president, have agreed with the Federal Trade Commission to stop representing that their product, Tay-Ban, is harmless and will reduce fat without the user dieting or exercising; that it is recommended by physicians as a weight-reducing remedy, and is capable of giving beauty to the body, skin or eyes. The re-



THE MAN WHO IS NEVER SATISFIED

He is called Chief Chemist. His office is in the laboratory. At any hour of the day or night you may find him in the factory, filling, or packaging rooms. He is ever eager to improve quality and production. He is persistent—never satisfied.

He is the type of man who inspired the J. T. Baker Chemical Co., after thirty years of producing C. P. Analyzed Reagents for laboratory testing, to turn their attention to supplying pharmaceutical houses with fine chemicals—measured purity by the ton.

The J. T. Baker Chemical Co. is grateful to this type of man—for his help and inspiration. A large number of such men, representing some of the finest pharmaceutical manufacturers, have in turn expressed their appreciation to Baker for making available truly fine chemicals with emphasis on maximum purity rather than minimum standards of purity.

If your Chief Chemist is never satisfied, it will pay you to investigate Baker's Fine Chemicals. See the Baker salesman the next time he calls. You will find him a worthy representative reflecting the spirit of the entire Baker organization.

A partial list of Tonnage Fine Chemicals held under rigid control, at no price premium.

- Alkali Bromides
- Potassium Iodide
- Magnesium Oxide
- Cream of Tartar
- Bismuth Subcarbonate—Subnitrate and other Salts
- Caustic Potash and Soda Sticks and Pellets
- Rochelle Salt
- Lead Acetate
- Salicylates

J. T. BAKER CHEMICAL CO., Phillipsburg, New Jersey

NEW YORK	PHILADELPHIA	CHICAGO
420 Lexington Avenue	220 South 16th Street	435 North Michigan Ave.

Baker's fine chemicals
for Pharmaceutical Manufacturers

Not Just PRECIPITATED CHALK!
But STURGES STANDARD

— ***a PRECIPITATED CHALK developed by many years of highly specialized research in different grades for specific uses.***

Dentifrice, Tablet, Face Powder manufacturers, and others who use Precipitated Chalk, have followed for years the specialized research of John & E. Sturge, Ltd. in developing the most suitable grades of precipitated chalk for a specific purpose.

The study of particle shape, degree of their aggregation, amount of absorbed air, amount of air held mechanically by the aggregate, are some of the studies made in physical and chemical characteristics, that have led to the manufacture of rigidly controlled grades most suitable for a specific type of product.

That is why so many manufacturers today insist on Sturges Standard Precipitated Chalk. They know that they can select a grade developed by long research ideally suited to the product they wish to make—and they know that they can depend on absolute uniformity in deliveries of this grade.

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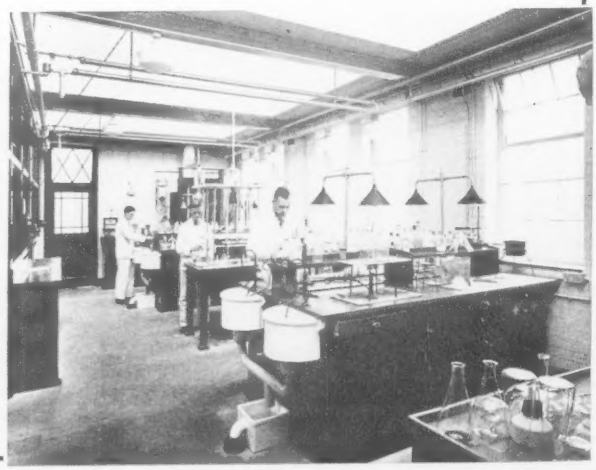
JOHN & E. STURGE
LIMITED

Distributors:

H. J. BAKER & BRO.
271 Madison Ave. • New York, N. Y.



Lilac
Lilantheme
$28.00 lb.
True to the Lilac character, Lilantheme is indispensable as a dominant note for fine extracts and high class toilet preparations.
Lilac R
$12.00 lb.
The Lilac of greatest utility. A warm flowery note, ideal as the basic character for powders, inexpensive extracts and lotions.
Lilac 3699
$8.00 lb.
A new and excellent Lilac type, for creams particularly—fresh, flowery and very lasting.
Firmenich + Co., Inc.
135 FIFTH AVE., NEW YORK
CHICAGO OFFICE: 344 NORTH RUSH STREET

This is the second in a series of two advertisements on Vanillin Monsanto.

A DECADE OF PROGRESS!

Ten years ago, Monsanto introduced to America a new high standard of Vanillin, produced from the basic elements of carbon, hydrogen and oxygen.

Today, after a decade of progress in its improvement, America is no longer dependent upon foreign sources for the rare materials formerly used in the production of this pure and wholesome flavor. Instead, a continual domestic supply, the price of which has steadily declined during this period, is ready to meet the increasing demand. And Vanillin Monsanto is but one example of many in which Monsanto's research chemists have helped to contribute highest standards while constantly lowering costs.

Vanillin Monsanto, skillfully processed from the raw ingredients of nature, is a crowning culmination of man's ability to formulate quality products. It is manufactured in modern equipment under exact scientific control to insure its high degree of purity, true aroma and uniform flavor. Our productive facilities are so large that they are easily capable of caring for the nation's entire requirements.

The results of thirty years of concentrated effort by specialized technicians in the formulation and improvement of a quality Vanillin are *yours for the asking!* We solicit your inquiries for this and other Monsanto products.

☆ VANILLIN MONSANTO, produced by the world's largest manufacturer of Vanillin, is the first choice of discriminating buyers because it adds to the salability of their products. ☆

Monsanto Chemical Company
ST. LOUIS, U.S.A.

spondents admit that their product is not used generally by the Hollywood film colony or film stars and agree to cease making such representation.

Paul Pharmacal Signs with F.T.C.

As the result of an action brought by the Federal Trade Commission, Paul and Ethel M. Mondello, operating as Paul Pharmacal Co. and as Mondello Pharmacy, Boston, have agreed to stop misrepresenting that Erba de Monaci (Friars' Tea) assures complete digestion, will clean the system of poisons, and is of value in the treatment of gall bladder trouble; that Liquore dei Monaci (Friars' Tonic) is a competent treatment for impure blood, carbuncles, boils, p i m p l e s, nervous diseases, indigestion, impaired liver action, or premature old age, and that Linimento del Capuccino is effective in the treatment of rheumatism or neuralgia and will terminate pains caused by dampness.

F.T.C. Orders Stock to Cease

The Federal Trade Commission has ordered Fred A. Stock, Quincy, Ill., trading as Stock's Nu-Tone Tonic to discontinue advertising that Stock's Nu-Tone Tonic is a remedy or treatment for underweight or run-down condition; is a competent remedy in the treatment or prevention of common colds; is capable of making one feel strong, healthy or more vigorous and that thousands have been helped to health by using it.

New Drug Offered

In accordance with section 505 (i) of the new Food, Drug and Cosmetic Act which requires that a new drug need not be first submitted "when it is to be used solely for investigational use by experts qualified by scientific training and experience to investigate the safety of drugs" S. B. Penick & Co., has sent out with the announcement of its new botanical drug, Devil's Club Root, a form to be signed by those people interested in buying a small quantity for investigational purposes only.

Devil's Club Root is believed to be the first new drug to be offered to the public since the passage of the new Federal Food, Drug and Cosmetic Act.

Commissioner Freer Reappointed

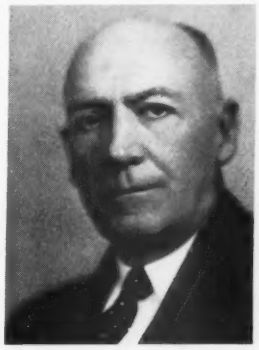
Commissioner Robert E. Freer has been reappointed by President Roosevelt for another seven-year term on the Federal Trade Commission. His new term will begin September 25.

Earlier this year Major Freer was assigned to supervise the Commission's work in regulating the advertising of drugs, cosmetics, devices and foods under the Wheeler-Lea bill. The year before the commissioner conducted the Fair Trade Practice Conference of the perfume and cosmetic manufacturers.

Changes in F.D.A. Personnel

W. G. Campbell, enforcement chief of the Federal Food and Drug Administration, has announced a number of changes in personnel made necessary by the recently enacted Federal Food, Drug and Cosmetic Act.

Roy S. Pruitt, now chief chemist of the New Orleans Food and Drug Inspection Station, will be transferred to Washington and attached to the office of the chief to handle administrative details of the new cosmetic section of the law. Dan Dahle, at present associate chemist in the Food Division of the Food and Drug Administration in Washington, has been assigned to develop laboratory methods for the



WALTER G. CAMPBELL

analysis of cosmetics and will work in close cooperation with Mr. Pruitt.

Dr. J. J. Durrett, now chief of the Drug Division of the Administration in Washington, becomes principal technical adviser and is attached to the office of the chief of the Administration. He will share with other officers attached directly to that office the responsibility of determin-

IDR. THEODORE G. KLUMPP

ing administrative questions on the application of the new law to drugs, devices, special dietary products and cosmetics, and will give special consideration to the adequacy of information submitted by manufacturers with their applications on new drugs filed in compliance with the provisions of the Act.

Dr. Theodore G. Klumpp, now senior medical officer of the Drug Division, succeeds Dr. Durrett as chief of that Division. Dr. Klumpp is a graduate of Princeton, received his medical degree at Harvard

ROY S. PRUITT

Medical School in 1928, served his internship at Peter Bent Brigham Hospital in Boston, was Assistant Resident Physician at Lakeside Hospital, Cleveland, instructor at Yale University Medical School, and an associate physician at the New Haven Hospital.

Joseph Callaway, Jr., now chief chemist of the Eastern Food and Drug Inspection District with headquarters in New York, is transferred to Washington as senior chemist to serve as technical assistant and secretary of the reorganized Food Standards Committee which will be composed of four state food law enforcement officials and two members of the Food and Drug Administration.

Peru Adopts the U.S.P. XI

At the first Peruvian Chemical Congress which was held in Lima in July it was recommended that the U.S.P. XI be adopted as official for the country, replacing the French Codex. It was also recommended that pharmacists be sent abroad each year at the expense of the government to study modern methods in other countries.

Associations

Chicago Tax Fight

The Chicago Perfumery, Soap and Extract Association, through its attorney, John S. Hall, is fighting the tax which its members would have to pay to the City of Chicago under the Chemical and Paint Ordinance. The minimum tax levied under this ordinance is $25, ranging up to $100. Mr. Hall is suing for an injunction restraining the city from levying this tax. Members of the association are being called upon for donations of $10 each to support the fight.

F.W.D.A. Meeting

The twenty-third annual convention of the Federal Wholesale Druggists' Asso-

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ciation will be held at the Stevens Hotel, Chicago, October 5, 6, 7 and 8. Delegates should make their own reservations with the hotel as early as possible. Lee Williamson is the national secretary of the association and A. E. Zuber of Mutual Drug Co. is the Chicago secretary.

Chemical Salesmen Golf

The Chemical Salesmen's Association held its final golf party of the season at Shackamaxon Country Club, Westfield, N. J., September 13.

Co-Metic Club Toilet Goods Show

The Co-Metic Club sponsored a toilet goods show at the Radisson Hotel, Minneapolis, September 5 to 9. This was the first time the organization has held a show of this type in this territory. The following lines were exhibited: Bourjois, Coty, Hudnut, Houbigant, Cutex, Cheramy, La Cross, Weco, Prophylactic, Yardley, Harriet Hubbard Ayer, Allen B. Wrisley, Parfumerie De Raymond, Zell, DeVillbiss.

Chicago Golf Winners

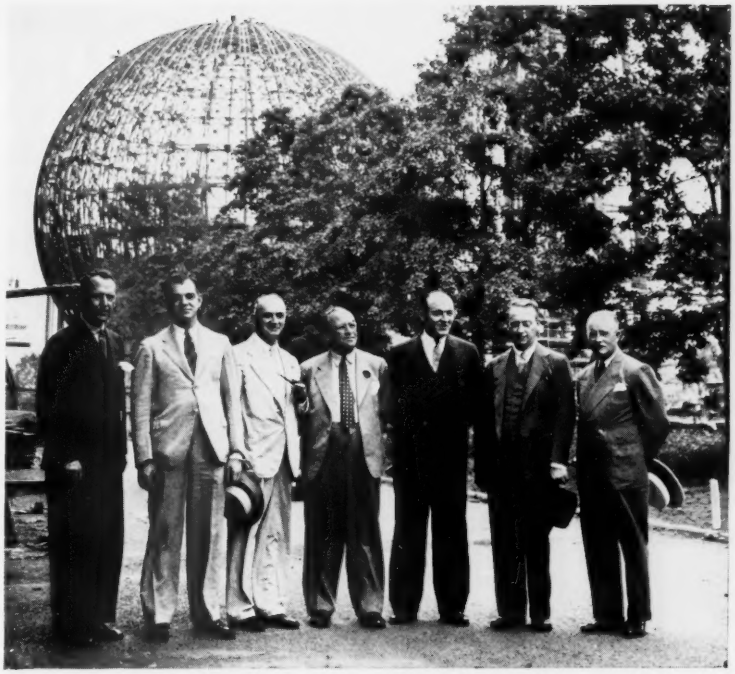
Winners in the fourth golf tournament of the Chicago Drug & Chemical and Chicago Perfumery Soap & Extract Associations at the Wilmette Country Club August 9 were: Class A: H. G. Larson, T. C. Sheffield, E. F. Smith; Class B: W. H. Jelly, H. V. Wallace, H. B. Vance; Class C: J. A. Gauer, H. K. Edson, R. L. Holland; Class D: K. S. Spraker, C. P. Van Schaick, Jr., G. F. Pauley; Guests: E. H. Erickson, R. L. Glanz, V. Heckler, R. E. Millard; R. L. Schwartz, R. C. Dodge; Special: T. C. Jesdale, E. L. Drach.

The next meeting of the golf auxiliary will be the inter-city meet with the Detroit association at the Olympia Fields Country Club, Chicago, on September 16.

Bims Golf Winners

The fourth regular monthly outing of the Bims was held at the North Hills Golf Club, Douglaston, L. I. on August 25. Winners in the golf match were: Albert C. Burgund, Carr-Lowrey Glass Co.; Eliott D. O'Dell, Fawcett Publications; Charles W. Darr, Harriet Hubbard Ayer; James B. Walker, Hazel-Atlas Glass Co.; W. Kyle Sheffield, New England Collapsible Tube Co.; Robert A. Kramer, Th. Goldschmidt Corp.; Fred W. Webster, Sagamore Metal Goods; S. E. Umensetter, Topics Publishing Co.; J. E. Valentine, and Augustus H. Bergman, Oxzyn Co.; H. D. Porter, Commercial Solvents Corp.; Rudolph Berls, McKesson & Robbins; William H. Gunther, George Schmitt & Co.; Dudley Schwartzman, Allen B. Wrisley Co., and Walter S. Nuckols, Swindell Bros.

The final tournament of the season will be held at the Ridgewood Country Club, Ridgewood, N. J., October 6.



Representatives of drug trade publications and others interested in the industry visiting the New York World's Fair 1939 to inspect the rapid progress being made in completing the Hall of Pharmacy, all the exhibit space in which has been taken over under contract by The Show Globe, Inc. In the photograph, with the completed steel framework of the Perisphere in the background, are, left to right: Earle A. Meyer, President, Show Globe; Harold Hutchins, *American Druggist;* Hugh Craig, *Oil, Paint and Drug Reporter;* James Gagin, *Chain Store Age;* Ray Schlotterer, Secretary, New York Board of Trade; Thomas R. Farrell, DRUG AND COSMETIC INDUSTRY; L. J. F. Moore, *American Druggist.*

Name Contest for Cosmetic Bldg.

H. Gregory Thomas, managing director of Perfumery & Cosmetic Exhibits, Inc., New York, has announced a prize contest to secure the best possible name for the building which is to house the perfume and cosmetic exhibits at the New York World's Fair 1939. Only demonstrators and other employees of companies which have made reservations for space in this building will be eligible to enter this contest and compete for the $100 prize which is offered. Ten consolation prizes of $10 each are also offered. A letter of not more than 50 words must accompany each entry telling why, in the contestant's opinion, the name submitted is the most suitable one. Names and accompanying letters should be addressed to Building Name Contest, Perfumery & Cosmetic Exhibits, Inc., 30 Rockefeller Plaza, New York. Letters must be post-marked no later than midnight, October 15. Judges are Louise Paine Benjamin, beauty editor and president of the Fashion Group; Donald Deskey, industrial designer and consultant on the exhibit building; Alice Hughes, beauty editor; Elmer Sheets, editor of *Toilet Requisites,* and Charles S. Welch, executive secretary of the Toilet Goods' Association and treasurer of Perfumery & Cosmetic Exhibits, Inc. The decision of these judges will be final.

Financial

Abbott Earns Less

Abbott Laboratories, North Chicago, Ill., reports for the year ended June 30, net profit of $1,588,391, equal to $2.40 a share and comparing with a net profit of $1,603,041, or $2.50 a share, in the year ended June 30, 1937.

Anchor-Hocking Earns $222,583

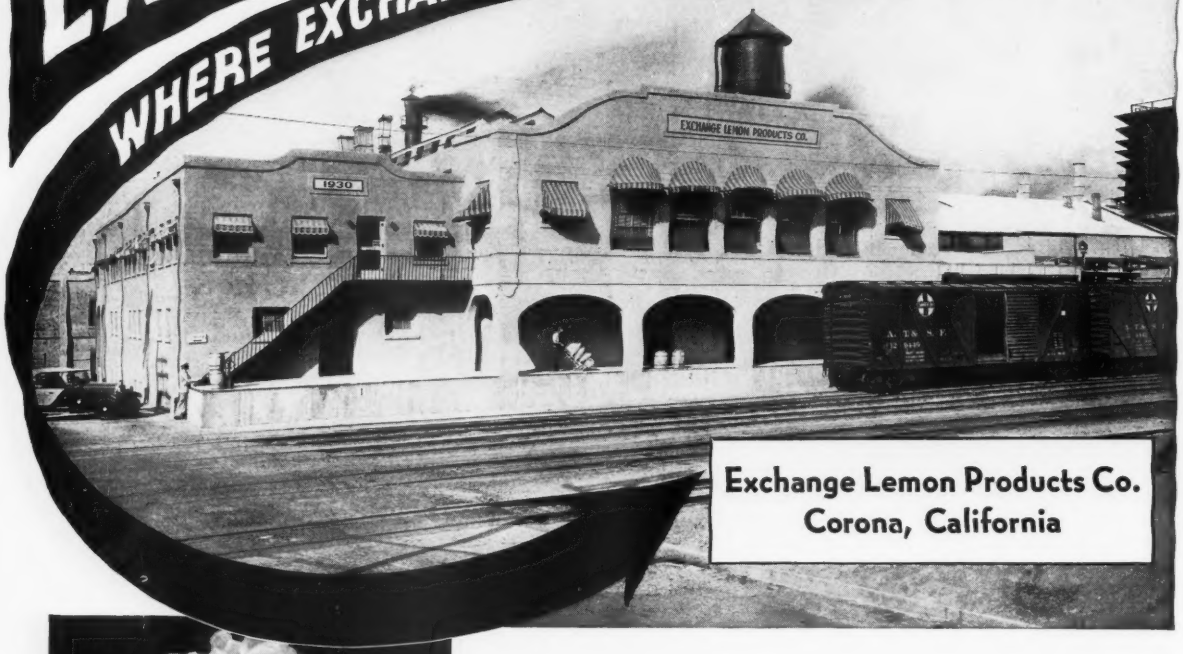
Anchor Hocking Glass Corp. and subsidiaries, report for the six months ended June 30 net profit of $222,583, equivalent to 12½ cents a share on 715,550 common shares.

Armstrong Earnings Sharply Lower

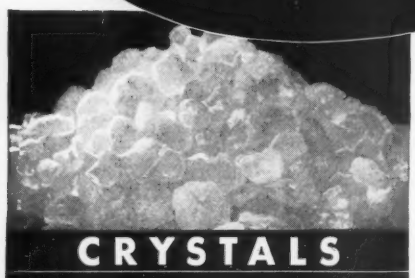
Armstrong Cork Co., reports for the first six months of 1938 net profit of $285,093, equivalent to 20 cents a share on the common stock and comparing with $3,825,030 for the first six months of 1937. It is estimated that the company's total investment in Spain amounts to $2,200,000, or slightly more than 4 per cent. of the company's total assets.

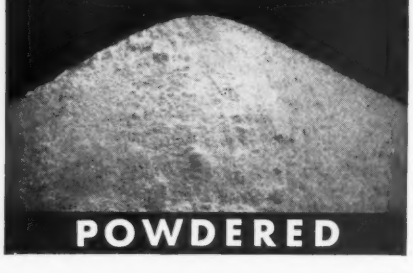
EXCHANGE CITRIC ACID U.S.P.

WHERE EXCHANGE CITRIC ACID IS MADE



Exchange Lemon Products Co.
Corona, California





Exchange Citric Acid U. S. P. is made by the Exchange Lemon Products Company of Corona, Calif. Backed by the Sunkist group of 13,500 citrus growers—largest in the world. Immediate shipments from warehouse stocks in New York, Chicago and Philadelphia. For prices on kegs, barrels or carloads, write nearest office.

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Exchange

CITRIC ACID U. S. P.

American Home Earnings Off

American Home Products Corp., Jersey City, reports for the six months ended June 30, net profit of $1,355,097, equivalent to $1.83 a share on 741,060 shares, and comparing with $1,552,661 earned in the first half of 1937.

Colgate Earnings Off Slightly

Colgate-Palmolive-Peet Corp., Jersey City, reports for the six months ended June 30 net earnings of $1,500,000 as compared with $1,715,697 in the first half of last year.

Coty Earns Less

Coty, Inc. and domestic subsidiaries, report for the six months ended June 30 net profit of $131,425, compared with $152,181 in the first half of 1937.

Crown Cork Earnings

Crown Cork & Seal Co., Inc. and wholly owned domestic subsidiaries, report for the six months ended June 30, 1938, net profit of $903,556, equivalent to $1.26 a share on 517,601 shares of common stock and comparing with a net profit of $999,966, or $1.44 a share on 517,582 common shares in the first half of 1937.

Gillette Earnings Off 50%

Gillette Safety Razor Co., Boston, reports for the six months ended June 30, net income of $1,430,425, equivalent to 34 cents a share on 1,998,769 shares of common stock and comparing with 67 cents a share earned in the first six months of 1937.

I.V.C. Earns $115,045

International Vitamin Corp. reports for the year ended June 30 net income of $106,651, equivalent to 52 cents a share on 204,000 shares of $1-par stock, and comparing with $115,045, or 56 cents a share, in the year ended June 30, 1937.

Lambert Earnings Steady

Lambert Co., St. Louis, reports for the quarter ended June 30 consolidated net profit of $223,324, equal to 30 cents a share on 746,371 shares. This compares with a net profit of $204,683, or 27 cents a share in the same quarter last year.

The net profit for the six months ended June 30 totaled $613,326 as compared with $652,061 in the first half of 1937.

Mead Johnson Earns More

Mead Johnson & Co. and subsidiaries report for the six months to June 30 net profit of $762,193 after provision of $19,590 representing the company's proportion of the loss of the American Soya Products Corp., equivalent to $4.26 a share on 165,000 shares of common stock. This compares with a net profit of $736,187, or $4.10 a common share in the same period last year. The company's share of the loss of the American Soya Products Corp. amounting to $21,640 was included in the income statement for the first six months of 1937.

Owens Earnings Off 50%

Owens-Illinois Glass Co. and subsidiaries report for the year ended June 30, 1938 net profit of $5,806,617, equivalent to $2.18 a share on 2,661,204 shares. This compares with a profit of $11,856,194, or $4.46 a share in the preceding twelve months.

The company has raised its regular quarterly dividend payment from 25 to 50 cents.

Procter & Gamble Earnings

Procter & Gamble, Cincinnati, reports for the year ended June 30 net sales of $209,302,119.88, comparing with sales of $218,874,361.93 in the year ended June 30, 1937.

Total earnings for the year amounted to $15,262,487.10. Added to net earnings is non-recurring income of $2,125,000 plus $4,000,000 reserve material, less taxes, making total of $17,439,193.87. This compares with net earnings of $26,803,339.87 for the fiscal year ended June 30, 1937.

Sharp & Dohme Earnings

Sharp & Dohme, Inc., Philadelphia, reports for the quarter ended June 30 net profit of $27,597, equivalent to 12 cents a share on 229,085 shares of $3.50 cumulative convertible preference stock. This compares with a net profit of $162,190 or 70 cents a share in the June 1937 quarter.

Sterling Products Earnings Off

Sterling Products, Inc., Wheeling, W. Va., reports for the six months ended June 30 net profit of $4,723,455, equal to $2.77 a share on 1,705,150 shares and comparing with a net profit of $5,172,680, or $3.03 a share, in the same period last year.

Vick Earns 8c for Quarter

Vick Chemical Co. and subsidiaries, report for the June quarter net earnings of $59,586, equivalent to approximately 8 cents a share on 700,280 shares. The company reports net earnings for the fiscal year ended June 30 of $2,248,138, or $3.21 a share.

Obituaries

J. Edward Murray

J. Edward Murray, president of the Emerson Drug Co., Baltimore, died of pneumonia August 14 in a hospital in Toronto, following a brief illness at his summer home in Big Bay Point, Ontario. He was forty-seven years old.

Mr. Murray was born in Durham, N. C. and attended the University of North Carolina and the University of Virginia. In 1913 he became assistant treasurer of the Emerson Drug Co. of which his uncle, Captain Isaac Emerson, was founder. He later became treasurer and, upon the death of Philip I. Heuisler, Sr., in 1936 he was made president of the company.

Mr. Murray was also president of the Maryland Glass Corp., Baltimore; a vice-president of the Citro Chemical Co. of New Jersey; president of the Bromo-Seltzer Co., Ltd., of Canada, a subsidiary of Emerson Drug Co., and vice-president and director of the Emerson Hotel Co., Baltimore.

He was a member of the Baltimore Drug Exchange, the Maryland Pharmaceutical Association, the Baltimore Country Club, the University Club and the Maryland Club. He was a member of the executive committee of the Proprietary Association.

Mr. Murray is survived by his widow, two sons and one daughter.

Max Factor

Max Factor died in Beverly Hills, Calif. August 30. He was sixty-one years old.

Mr. Factor was born in Russia and came to the United States in 1904. As early as 1910 he was supplying some of the motion picture studios with make-up. As the movie industry grew his fame as a make-up artist grew and he soon realized that his cosmetics would appeal to the general public and his business was greatly expanded accordingly.

MAX FACTOR

Henry C. Nutting

Henry C. Nutting, travelling representative for Eli Lilly & Co., Indianapolis, died in a hospital in Greensboro, N. C., August 6, following an illness of several months. He was fifty-six years old and had been associated with Eli Lilly & Co. for the past fifteen years.

Truth About Cosmetics

by **EVERETT G. McDONOUGH, Ph.D.**

Here is the answer to the avalanche of criticism directed against the cosmetic industry during the period when it became popular to "smear" business.

A searching and critical analysis of cosmetics and cosmetic action. A discussion of every type of cosmetic, their chemical character, their use and their established cosmetic value.

Written with the restraint and clarity of the true scientist, Dr. McDonough gives the reader a true picture of cosmetic values and a wealth of interesting information.

SEQUENCE OF CHAPTERS

I. Benefits of Cosmetics
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III. The Skin
IV. Skin Continued
V. Allergy
VI. Cosmetic Dermatitis
VII. Romance of Cosmetic Raw Materials
VIII. Cosmetic Colors
IX. Cold Cream and All-Purpose Creams
X. Creams and Lotions
XI. Foundation for Make-Up
XII. Make-Up Preparations
XIII. Face Powders
XIV. Acne and Preparations
XV. Pigmentation and Surface Stains Preparations
XVI. Nails, Hands and Arms
XVII. Hair Dyeing
XVIII. Other Hair Preparations
XIX. Superfluous Hair Removal
XX. Permanent Waving of Hair
XXI. Permanent Waving Solutions
XXII. Scalp Disorders
XXIII. Oral Preparations
XXIV. Sweat Glands and Preparations
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INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

The Pharmaceutical Pocket Book, Edited by C. E. Corfield, Thirteenth Edition, 370 pp., The Pharmaceutical Press, London, $1.50.

This valuable little book is published by direction of the Council of the Pharmaceutical Society of Great Britain. The following table of contents illustrates the completeness of this work and the subject matter covered: Atomic Weights, The Science and Art of Dispensing, Percentage Solutions; Homeopathic Pharmacy, Equivalent B. P. Formulae, Proportions of Active Ingredients in Preparations of the British Pharmacopoeia, Doses of Official Medicaments, Doses Proportionate to Age, Tables of Metric and Imperial Equivalents, Abbreviations used in Prescriptions, Milk and Milk Products, Water Analysis, The Examination of Urine, The Examination of Blood, The Examination of Gastric Contents, The Examination of Urinary Calculi, Pregnancy Diagnosis, Hydrogen Ion Concentration, Notes on Bacteriology, Bacteriological Chart, Food and Diet, The Vitamins, The Endocrine Organs, Table of Weights of Organs, How to Make a Herbarium, Material Medica of Vegetable and Animal Origin, Hydrometers, Alcohol Used in Medicinal Preparations, Dilution of Alcohol, Tables of Alcoholic Strength of the B. P. Preparations, Adjustment of Specific Gravity of a Liquid, Dilution of Sulphuric Acid Table, Sulphuric Acid for use in Accumulators, Specific Gravities of some Chemicals and other Substances, Table of Solubilities, Removal of Stains, Thermometric Scales, Temperature of Various Freezing-Mixtures, Physical Constants, Imperial Weights and Measures, Foreign Weights and Measures, Metric Weights and Measures, Metric and Imperial Equivalents, Equivalent Measures of Length, Equivalents of Weights or Measures of Mass and Capacity, Poisons and their Antidotes, List of Medicinal and Fatal Doses of Poisons, Veterinary Posological Table, Dictionary of Synonyms and Trade Names, Logarithms and Antilogarithms.

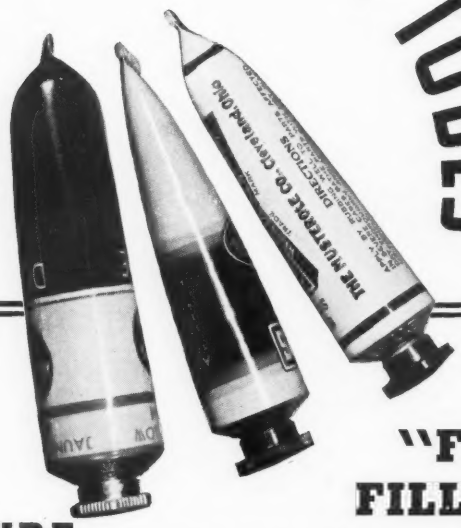
Air Conditioning, by Charles A. Fuller, M. E., 576 pp., Illus., Norman W. Henley Pub. Co., New York, cloth $4.00.

This is a practical, modern treatise on air conditioning, air distribution, refrigeration, comfort cooling, humidification and air purification. Included in its discussions are: the correct method of calculating heat gain in an enclosure; how to choose air volumes properly; how to supply air to an enclosure; how to design the most efficient duct systems; how to choose the necessary air handling and refrigerating equipment; how to select dehumidifiers, either of the cooling coil or air washer type; when a direct expansion type system should be used in preference to a circulating water type system and vice versa; how ice may be used in air conditioning; a discussion of steam jet refrigeration; a discussion of water vapor refrigeration; a discussion of the use of chemical dehumidification in air conditioning; an explanation of well water systems; and a general outline of prevailing codes and regulations. This book will tell you all you need to know about the increasingly important subject of air conditioning.

A Modern Spanish-English & English-Spanish Technical & Engineering Dictionary, by R. L. Guinle, 311 pp. Chem. Publishing Co. of N. Y., Cloth $4.00.

The dictionary contains all the words used in the three major divisions of engineering, as well as many on derived sciences. The majority of terms found in this work have been taken from the numerous tenders, specifications, catalogs, and reports of all sorts that the author has had to translate in his dealings with private customers and governments of South America as a professional consulting engineer. Contains all the words used in civil, mechanical, and electrical engineering also many on aviation, wireless, architecture, railways, automobiles, shipbuilding, marine, chemistry, physics, mathematics, geology, mining, metallurgy, geography, surveying, commerce, agriculture, textile machinery, machine tools, etc.

IF YOU PACKAGE IN TUBES



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Leakproof . . . Stronger than the Tube Itself

The new Westite Hermetic Closure is leak-proof. The seal is stronger than the tube metal itself. Makes a permanent seal that will hold light, oily products of the type that seep through some closures almost immediately. Makes an air-tight seal that fully protects food or other products from deterioration.

If "leaker" losses, resulting in spoilage, soiled packages, "returns," lost sales, dealer dissatisfaction, are causing you trouble and costing you money, investigate this new closure. It is not only leak-proof, but it requires less tube metal and no clips.

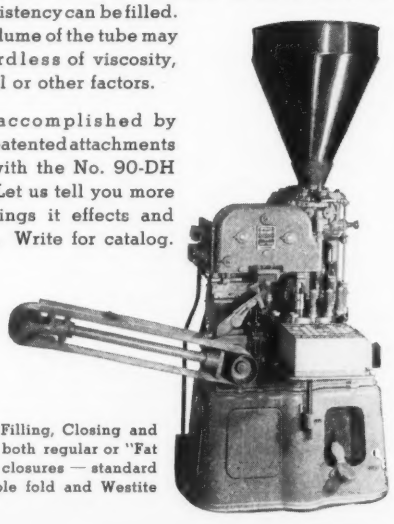
Let us send you more facts, about bursting strengths of hermetically sealed tubes, savings in clips and metal, etc. Send some of your own tubes for demonstration.

"FAT FILLING"
Saves Tube Metal . . . Puts More Material in Same Tube

"Fat Filling" increases sales, enhances appearance of the package. It puts the same amount of material in a shorter tube, which saves tube metal. Or it puts more product in the tubes you are using, approximately 10% more. Filling is fast, accurate, clean. Different degrees of "fat filling" can be had, to give tubes the best possible appearance. (Illustrated above are tubes with "fat fill", standard fill and "semi-fat-fill"). Materials of any consistency can be filled.

The full usable volume of the tube may be utilized regardless of viscosity, thickness of metal or other factors.

"Fat Filling" is accomplished by means of special patented attachments and cups, used with the No. 90-DH machine shown. Let us tell you more about it, the savings it effects and other advantages. Write for catalog.



Stokes 90-DH Tube Filling, Closing and Sealing Machine, for both regular or "Fat Filling." Makes all closures — standard double fold, quadruple fold and Westite hermetic closure.

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PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

LABELING

Quite a number of years ago before the package design craze had reached full frenzy we had a piece in this paper called Pitfalls in Package Design, in which we set forth some of the costly consequences of package design which fails to provide for all the factors entering into production. This article went through quite a few versions in numerous trade papers in this trade and out of it. When the design craze was at its heights and long haired designers began dumping more monstrosities upon production men, other colleagues got up their wind and began to howl bloody murder. Articles began to appear in which repetition was piled upon repetition until one assumed that the last word had been said and that henceforth production men could rest easier. But apparently nobody read the repetitious articles for we've noticed that the old blunders go on being made.

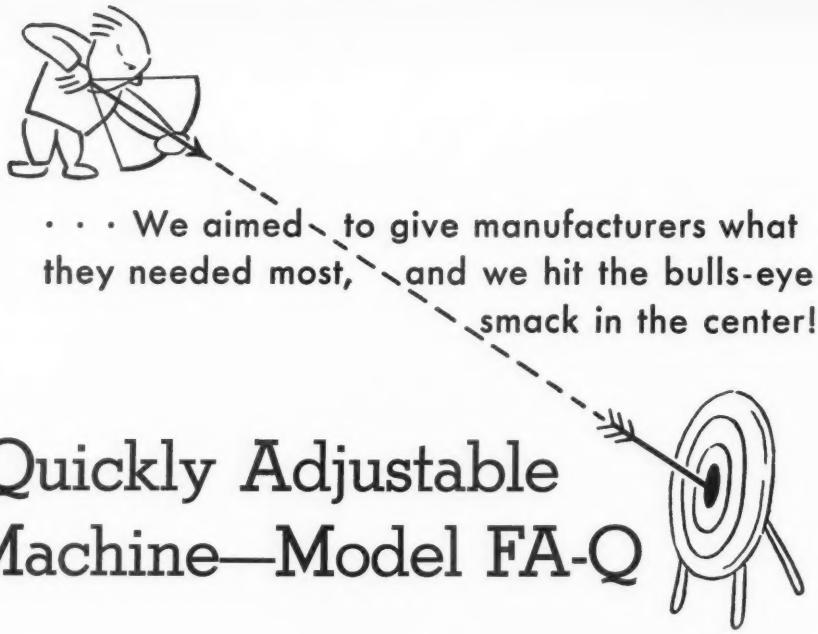
Recently we witnessed an example of what improper packaging materials can do in a production set up. In this case a decision was made to use lacquered labels to replace what had been used before. As usual in such cases everybody in the organization from the janitor up had a hand in the discussions as to the quality of paper stock, the kind of lacquer to use etc. etc. The result was that when the labels were printed part were made of fifty pound, smooth surfaced stock and part were made of sixty pound stock, all too heavily lacquered. The operating results were as follows: the labels on fifty pound stock did not have body enough to absorb the moisture in the glue consequently they blistered so badly that nothing could be done with them. Those on sixty pound stock were too heavy and the edges rolled back in spite of additional hand rubbing after the labels had been applied. Altogether it was a hell of a mess.

Therefore the specifications for lacquered labels may be worth repeating: use a 55 pound, porous paper stock, litho coated on one side. Use as thin a film of lacquer as can be applied—a thin film will give protection against 70% alcohol. Don't lacquer labels that are required to go around three sides of small bottles. Don't lacquer vial labels at all. Use varnished labels as often as possible and remember there are now available gloss inks which will make ordinary label paper appear as if it were lacquered. These gloss inks can be printed in solid backgrounds and will take over-printing. We've seen some gloss ink jobs that looked like lacquered labels. Next bit of advice: Don't change all labels at once. Try a few items for a month or two until actual plant runs show you that you have the right combination of stock, glue and lacquer. We have found that National Adhesives 361 will do a good job in holding lacquered labels. Use the same glue for hand labeling.

BATCH WEIGHER

If you're one of those secretive fellows you will be interested to know that Buffalo Scale Corp., Buffalo, N. Y. has developed an automatic sequence batching scale with which the various ingredients of a dry product can be weighed off automatically in a manner which conceals the formula from the operator. This is accomplished in the following manner; the scale or proportioning device consists of a number of weighing beams corresponding to the number of ingredients in the formula, the whole assembly being concealed within a panel box.

Each beam is set for the required weight of the particular ingredient and an interlocking sequence device is provided so that the operator cannot skip an ingredient. The device can be applied to any style of platform scale and the ingredients can be weighed into any kind of container. The only thing this device doesn't do apparently is to prevent the operator from duplicat-

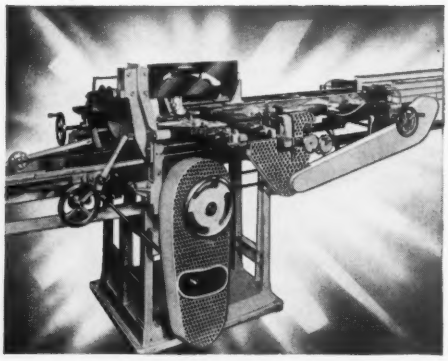


. . . We aimed to give manufacturers what they needed most, and we hit the bulls-eye smack in the center!

A More Quickly Adjustable Wrapping Machine—Model FA-Q

With our new Model FA-Q, you can change from one size package to another *in only ten minutes*—one third of former time for this adjustment. Hand wheels are conveniently located for all adjusting . . . no tools are required.

Moreover, the FA-Q has an extremely wide size range. And it can be equipped to handle glassine, transparent cellulose, waxed paper, foil, or plain paper wrappers. Such versatility makes it ideal for manufacturers in many fields.



Speed is 40 to 70 packages per minute, depending on the size and nature of the package. Uses roll or sheet feed. ELECTRIC EYE may be provided for registration of printed material fed from a roll.

Compare your present wrapping methods with the advantages offered by the FA-Q. Consult our nearest office, or write for literature.

PACKAGE MACHINERY COMPANY . . . . . Springfield, Massachusetts
NEW YORK CHICAGO CLEVELAND LOS ANGELES
Mexico, D. F., Apartado 2303 Buenos Aires, Argentina: David H. Orton, Maipu 231
Peterborough, England: Baker Perkins, Ltd. Melbourne, Australia: Baker Perkins, Pty., Ltd.

PACKAGE MACHINERY COMPANY
Over a Quarter Billion Packages per day are wrapped on our Machines

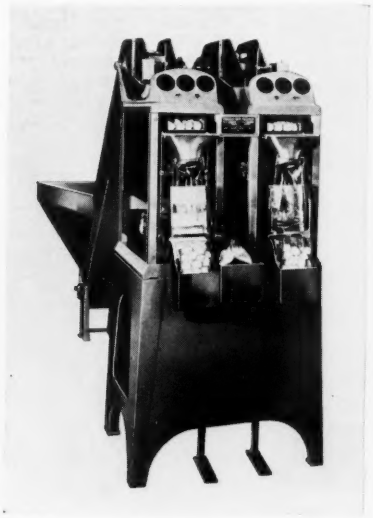
ing or mixing up the ingredients. One can see, however, that in very large installations batching operations can be made fully automatic by means of electrically operated traveling hoppers.

SUMNER ADVANCED

A promotion to which he has long been entitled came last week to Howard Sumner of the Norwich Pharmacal Co., when he was advanced to the post of assistant general manager. George Bengert has taken over Howard's old job of plant manager. When I heard the good news last week on a visit to the Norwich plant with Harry Sander of Grove Laboratories, I was more than delighted. For three years during the modernization of the Norwich plant I worked with Howard; played with him; fought with him and, at the end of the period when the job was done, I could honestly say that I had never known an abler man nor a more sincere friend. It is futile to wish him luck. Howard is the kind of man who doesn't need it.

ELEC-TRI-PAK WEIGHER

The Triangle Package Machinery Company, Chicago, has announced the Triangle-Rapp "Elec-Tri-Pak" Weigher, a new packaging machine. It is designed to package a wide range of products, including items heretofore never handled by machine, into containers by means of electrically operated vibration plates called



"Electric Fingers." It is said to handle delicate products such as potato chips, marshmallows, crackers, etc., without injuring them in any manner. Other items being packaged by the machine include candies, tablets, pills, seeds, etc.

The manufacturer guarantees accurate weights within a small fraction of an ounce as well as a production 3 to 4 times that of hand packaging.

Control of the machine is accomplished by means of specially calibrated radio-type dials.

The hopper, an integral part of the machine, is waist-high to facilitate loading. A continuous belt carries the products from the hopper to the vibrator feed plates. The action of these vibrating plates is such that discharge is rapid until the container is filled close to weight—then, the vibration changes so as to dribble in just enough to bring the package to exact weight. Adjustments can be made to set the machine at a wide range of pre-determined weights.

SMALL BOILER

For small plants requiring 100 pound steam in relatively small quantities, the Kewanee Boiler Corp., Kewanee, Ill. has developed a small fire tube, scotch marine type boiler. This unit is available in five sizes ranging from ten to thirty hp. This boiler can be fired by coal, oil or gas and is shipped complete with all accessories ready for installation. Brickwork is not required.

BUYING POWDER FILLERS

Whenever you buy a powder filler from anybody always insist emphatically that the powder samples shipped for test purposes be thoroughly sifted and aerated before the test run is made. Such a precaution is doubly necessary in dealing with large containers. It is a good idea to make this specification a part of the order and to require a statement from the equipment manufacturer that the p o w d e r sent for test was thoroughly fluffed up before it was run in the machine. Twice within the past year we have been annoyed by the failure of powder equipment builders to observe this precaution with the result that when the equipment was set up a great deal of difficulty was encountered in packing the required weight into containers. The reason for such a condition is this: When powder of any kind is freshly made it will remain comparatively fluffy for a longer period than you imagine, but gradually it will settle and become very compact. When you ship a barrel of powder to an equipment builder the chances are that it will set in the barrel for a month or more before the test run is made. At that time, therefore, the material is dense and the containers will fill perfectly. The product thus filled is very different in bulking properties from what it is in the plant, especially when the freshly mixed or sifted product is delivered directly to the filling machine supply hopper. Considering even the minimum rate of filling speed there is not sufficient time for the filling auger to hold the powder under compression. In consequence the container will apparently be full but it will not have the required weight in it.

FILTER

American Seitz Filter Corp., 480 Lexington Ave., N. Y. C., has introduced a compact filtration unit consisting of a pre-mix tank, a pump and a tank filter mounted on a portable stand. The premix tank can be used for adding the filter aid or carbon black to the liquid to be filtered. The filtering element is suspended in a pressure tank and is very easy to remove after the filtration cycle has been completed.

From a recent financial service:

"The keen competition and narrow profit margins which characterize most of our industries have made it increasingly hazardous to continue production with outmoded equipment."

HERE'S WHAT COLGATE'S DID ABOUT IT!

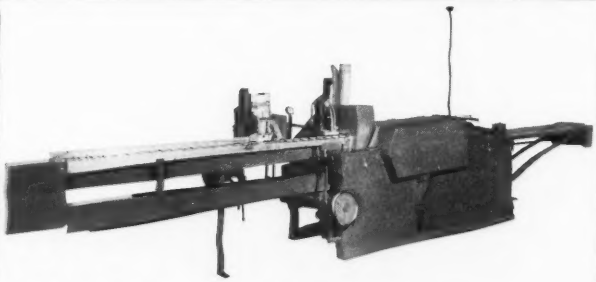
Colgate-Palmolive-Peet knows but one standard in its packaging methods (as in everything else!) . . . *top-efficiency!* When a machine becomes outmoded, *out it goes, regardless of the original cost.*

*Typical is the replacement of two old, slow, in*efficient machines by *one* 1938 top-speed Redington Continuous Loading Cartoning Machine. It cartons Colgate's medium size tube of Dental Cream and folds an insert over the top of the tube at a remarkably high speed.

Only *half* the former number of operators are needed . . . *half* the floor space. The economies on this Redington will pay for the original investment in a short time and earn handsome dividends for years after.

Other Redington Cartoning Machines are handling the larger size of Dental Cream, the special carton of Cashmere Bouquet Soap and the three sizes of Dental Powder (*one* adjustable Redington cartons all three sizes).

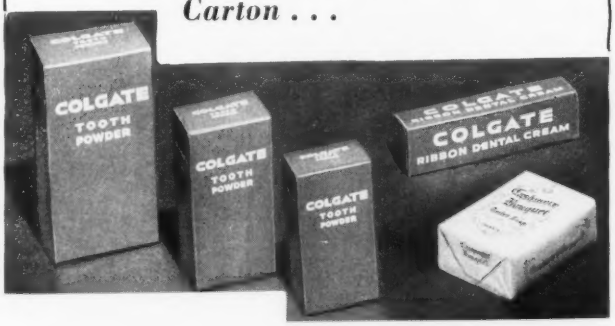
Perhaps Colgate's experience with outmoded equipment isn't similar to your problem. But whatever it is, you'll find that, "If It's Packaging —It Pays to Try Redington First."



This New Redington . . .

designed for Colgate's medium size tube of Dental Cream is the latest type Continuous Loading Cartoning Machine . . . smooth, quiet, remarkably efficient. Handles collapsible tubes, jars, bottles, cans and other containers at a high speed. Mechanism for folding and inserting a circular and handling special items can be easily attached.

Other Redington Machines Carton . . .



F. B. REDINGTON CO. (Est. 1897) 115 So. Sangamon Street CHICAGO, ILL.

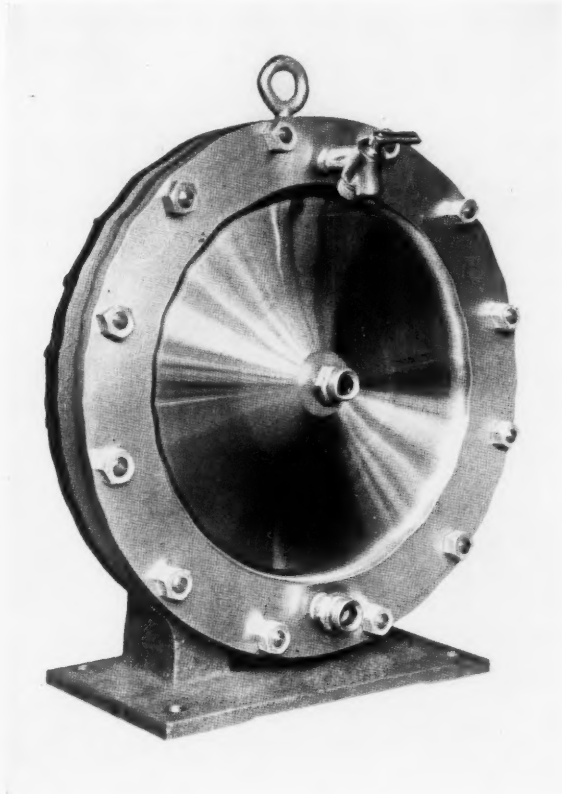
REDINGTON *Packaging Machines*

for CARTONING • CELLOPHANE WRAPPING • CARTON SEALING

SONIC EMULSIFICATION

So much interest was aroused by our several comments on the use of sound waves for emulsification purposes, that we wish to pursue the subject somewhat farther and to present herewith more of the data we have been collecting. The peculiar effect of ultra sonic waves *i. e.*, frequencies higher than 100,000 cycles per second on emulsions has long been known to colloid chemists. Since 1927 research on the subject has intensified, but for practical purposes the study of Dr. L. A. Chambers of the University of Pennsylvania, "Soft Curd Character Induced in Milk, by Intense Sonic Vibrations," published in the Journal of Dairy Science, January 1936, Vol. 19, No. 1, just about sums the whole subject up.

The sonic oscillator to which we have been referring in these comments is comparatively a low frequency



unit and was first used so far as we know in the production of soft curd milk for infants who can not digest whole cow's milk because of its tendency to form large tough curds in the stomach. Sonic emulsification does two things to milk; one, it makes it more digestible by preventing the formation of hard curds; two, it prevents the formation of a cream line, thus indicating the perfection of dispersion of the butter fat.

When we speak of low frequencies we mean that the machine in question operates at a frequency of 360 cycles per second and is capable of handling light emulsions at 250 gallons per hour with a power input of 5½ hp. The oscillator consists of a round stainless steel diaphragm approximately two feet in diameter and a stainless steel cover which, when bolted against the cover, forms a chamber therewith. Liquid to be treated is admitted through inlets at the outer edge of the cover and flows across the rapidly vibrating diaphragm to the centrally located discharge port. The electric windings and magnetic circuit on the back of the diaphragm are water cooled. To clean the apparatus hot water or any other solvent may be flushed through it or the cover may be removed and the diaphragm and inner surface of the cover wiped off. The simplicity of the cleaning operation is obvious. The complete equipment consists of the control panel, a motor generator set and the oscillator, which incidentally is provided with an insulated mounting and a sound proof case.

Since the apparatus was first produced for the dairy industries we don't know yet whether the manufacturer of the equipment wishes to extend his field. We are in correspondence with him now and will learn in the near future whether a testing laboratory has been set up.

BACTERIAL SPORES IN DRUGS

We've observed that in the spice industry quite some attention is being given to the problem of fumigating spices with ethylene oxide to kill bacterial spores because these spores have some effect upon the quality of extracts and upon the keeping qualities of the preparations in which they are used. In reading about the new plant installed by McCormick & Co. of Baltimore for this purpose we wondered if the effect of bacterial spores had ever been investigated in connection with crude drugs—especially water extractives like cascara. The latter interests us especially because of the differences in the finished product—differences in color, taste, odor and amount of precipitate. Each manufacturer is dogmatically certain that his process is best and that his fluid extract is superior to any one else's. Since all manufacturers use the same bark from the same source, there must be more than process reasons to account for the differences in finished product. If spices can affect the finished product in which they are used even though such finished products are cooked, it may be safe to assume that the hot water used in cascara extraction does not nullify their effect altogether.

READ MACHINERY STEPS OUT

If you see a guy going around with his nose stuck up in the air just smack it for it will be Jack Eads of Read Machinery Co. of York, Pa. who has just landed a single order for processing equipment from Hercules Powder Co. amount to $133,000. Jack is doing a bit of strutting as a consequence. They've written him up in the local paper. They've made him Grand Saleshawk of the local chamber of commerce and Major General of the local fife and drum corps. There'll be no standing him now. But Jack is not so bad, although it occasionally happens that for reasons best known to himself he keeps appointments twenty-four hours late.

DOES STICKY WEATHER
CAUSE YOU TROUBLE?

DOES HIGH HUMIDITY
DELAY YOUR PROCESS?

DOES ATMOSPHERIC MOISTURE
SPOIL YOUR PRODUCT?

DO YOU NEED A CONSTANT
LOW RELATIVE HUMIDITY?

FOR WINTER DRYNESS ON HUMID SUMMER DAYS

USE THE

LECTRODRYER

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ADSORPTION DEHUMIDIFIER

The high moisture content of the summer air, which has been so troublesome during the past few months, can be effectively and dependably controlled. The LECTRO-DRYER is designed especially for this purpose. Lower than normal relative humidities are maintained throughout the year. Write for bulletin AC and further particulars.

PITTSBURGH LECTRODRYER CORPORATION

FOOT OF 32ND ST. PITTSBURGH, PA.

EXTRACTION

Last week we received a pleasing report both from Dr. Irvine W. Grote and W. F. Smith if the Chattanooga Medicine Co. on the operation of the senna extraction plant which we developed and set up for them last year. We were informed that a complete extraction and concentration cycle requires only twenty-four hours instead of the forty-eight for which it was designed. Naturally this pleased us very much because the first few runs required seventy-two hours before the apparatus got broken in.

The plant consists of a vertical vacuum extractor and a rapid circulation type evaporator. The latter was used because senna percolate is so easily charred by overheating or long contact with hot surfaces. In other words we used a modified, rapid circulation type milk evaporator because we recognized that in concentrating milk the problems of taste and discoloration are avoided by keeping the milk circulating at high velocity.

The extractor is we believe unique. It is a vertical unit having a steam jacket, an agitator, bottom drain plates, loading doors, etc. The unit may be used as an ordinary percolator. It may be used as a recirculating percolator; it may be used as a pressure percolator with upward or downward displacement. It may be used as a vacuum extractor and as a dreg still. We didn't think of any other way that drug might be extracted or we should have made provision for it in the design of the apparatus. There are filters on top of the apparatus as well as on the bottom.

An unique feature of the apparatus is the fact that the extractor has a reversed dished bottom. This proved to be a happy thought for more reasons than one. Originally we conceived the idea in order to reduce the height of the vessel which is in excess of fifteen feet to the top of the motor. Since the vessels were built for a working pressure of 100 pounds the upper and lower heads were dished. Reversing the bottom plate was fortunate because the space between the arc of the bottom and the inner wall of the shell provided an excellent location for the bottom screens. This construction allowed us to use about one-half the area of the bottom of the vessel for outlet screens. The circular screens were put in in sections and every part of the vessel is so completely accessible that it can be called a sanitary unit.

The principle of the apparatus is similar to that of the Grove plant which was its predecessor. The drug is loaded into the extractor dry. A high vacuum is drawn on the charge and the menstruum is admitted. The vacuum is then broken to impregnate the drug and the charge is mixed for a definite length of time. The percolate is drawn through outside filters into the calandria of the rapid circulating evaporator. As the percolate is concentrated the recovered alcohol is pumped back over the drug in the extractor. When the drug has been extracted the extractor is allowed to drain for a short time and then the steam is turned on for the recovery of the residual alcohol.

Even as the original vacuum extraction plant at Grove Laboratories gave us the experience and ideas necessary for the development of the Chattanooga plant, the latter plant has also contributed its lessons which someday we hope will result in a more efficient plant than either.

FOREMANSHIP

In connection with a note made a month or two ago about the general need for competent foreman, C. A. Gillispie of Villa Park, Ill., wrote me a letter in which he made a nice distinction between ordinary foremen and college trained men. The uneducated foreman, he says, frequently fails to gain the respect of his workers or their full cooperation because of intimidation, prejudices, arrogance, stubbornness or partiality. The college man on the other hand knows, until he gets the bumps rubbed off, that if you have twenty sheep in a pen and one jumps the fence you will have nineteen left. But he does not know sheep, for if one jumps the fence over they all go—this being the difference between practical experience and theory.

The lack of trained foreman or department heads may partly be charged to the failure of the pharmacy schools to serve the manufacturing industry. For years the schools have been turning out prescription counter men, soda jerkers and merchants and the major emphasis of these schools has been placed upon retail pharmacy. In consequence the manufacturer who employs a pharmacist must educate him for three or four years more before the man loses the drug store view point. Often they never lose it. We know of a number of plants whose department heads are all good pharmacists but they are incompetent department heads. They know all about pharmacy but little or nothing about getting the goods out at the lowest possible cost in the most expeditious and sanitary manner. On the other hand we know of some other plants that will not employ pharmacists at all on the ground that they have not sufficient training on the one hand for research work; nor enough practical training on the other for plant work. We have known a very few pharmacists who were able to surmount the effects of their drug store training and became first class plant men. But there are not many. It is an interesting commentary that the most capable department heads we have encountered in the trade were neither pharmacists nor chemists. It seems to us that pharmacy schools generally should split their courses so that the students who are so inclined may specialize in manufacturing pharmacy and plant management. It seems to us that as time goes on the prescription counter will become less and less important as doctors continue to prescribe specialties, made by manufacturers who have sufficient resources to ensure purity.

HERE COMES BUSINESS

Prepare for Increased Production NOW

The dam is broken, here come orders flooding in. Will you be able to make deliveries? Is your plant geared to take care of business far greater than last year? Guaranteed REBUILT EQUIPMENT is economical insurance against being caught short. Check this list for machinery you can use.

Stokes "D", "DD", "H" and "R" Tablet Machines.
Colton No. 2 Triple Punch Dies.
2 Pfaudler 100 gal. Perfect Jacketed Stills.
12 Day Sifters and Mixers 50 to 4000 lbs. some still in actual operation.
3 McDonald Automatic Labelers.
3 Standard Knapp Automatic Gluing and Sealing Machines.
6 J. H. Day 2½ to 40 gal. Pony Mixers.
Samco Jr. 8 Spout Vacuum Filler.
Colton 6 C and Stokes 90 C Automatic Tube Fillers (Monel Construction).
2 Pneumatic Scale 6 Head Automatic Screw Cappers.
8 Pfaudler Glass Lined Tanks 30 to 450 gal. some agitated Stokes & Smith Model G and Stokes No. 15 Powder Fillers.
2 Eppenbach Colloid Mills 1½ H. P. motors (one Stainless).

MISCELLANEOUS: Kettles, Filter Presses, Agitators, Boilers, Grinders, Pulverizers, Mass Mixers, Disc and Gravity Filters, Filling Machines, Conveyors, Labelling Machines, etc.

SEND FOR NEW ILLUSTRATED CATALOG JUST OUT.

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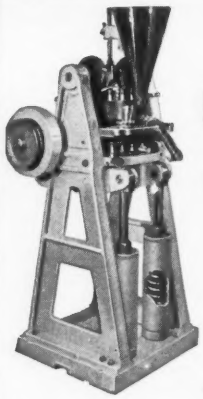
"We purchase your surplus equipment"

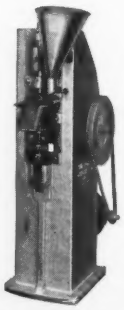


SINGLE PUNCH and Rotary Tablet Presses

RUGGED CONSTRUCTION

TWELVE MODELS
Single and Double Action

Without a peer from the standpoint of *rigidity of design*, as well as for *durability* and *low cost of maintenance*.



Preforms of bakelite and other materials

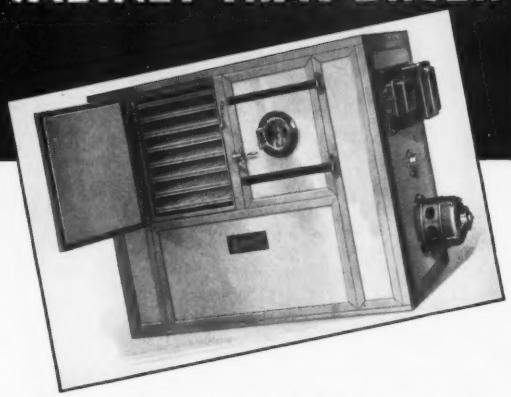
SPECIAL PRESSES BUILT TO ORDER

Send for New Catalogue and Prices

Kux-Lohner Machine Co.
2145 Lexington St. Chicago, Ill.

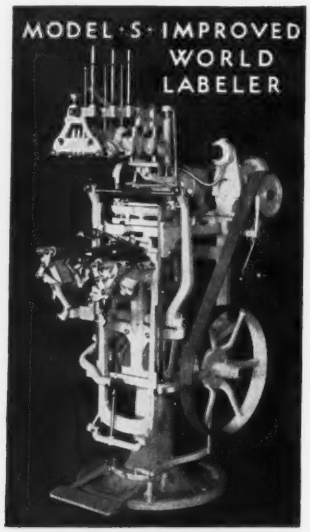
All Single Punch and Rotary Presses Completely Covered by Patents

New PROCTOR CABINET TRAY DRYER



CONTROLLED and perfectly UNIFORM drying is often important to the color and texture of a product . . . and in the drug and cosmetic industry, especially, any variation in color and texture often means the difference between high and low quality. Proctor Dryers, whether of the standard cabinet tray type shown above or machines especially designed for a particular drying problem, have earned a reputation in a large number of installations for drying pharmaceuticals, cosmetics and allied products *correctly*, efficiently and economically.

PROCTOR & SCHWARTZ · INC
PHILADELPHIA



The most flexible labeling machine. Easily equipped for labeling any size bottle or jar. Many exclusive mechanical features, developed by manufacturing experience of more than 35 years.

Economic Machinery Company
WORCESTER, MASS.
Makers of complete line of automatic and semi-automatic labelers.

No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.

Detroit, Michigan

ILOILO, KARACHI, MOMBASA and GUAYAQUIL

Not a proof reader's nightmare, but actual places where *Consolidated's Guaranteed Rebuilt Equipment* is giving satisfactory service. Join the world-wide ranks of pleased customers!

SELECTED SPECIALS

1—Pneumatic Scale Packaging Unit, carton feeder, top and bottom sealer, 2-stage weigher, Wax liner unit.
1—Pneumatic Scale Automatic Screw Capper; 4 Kramer, semi-automatic.
2—Samco Jr. 6 spout Vacuum straight line Fillers.
5—Gravity and Vacuum Bottle Fillers, 2 to 6 spout.
1—National MG Powder Filler and Weigher.
2—Ferguson Carton Wax Wrappers.
2—World Rotary Automatic Labelers.
1—World Automatic straight line Duplex Labeler.
8—World, Ermond and National semi-auto, motor driven Labelers.
8—Tablet Machines: 3—Colton 2B, ½"; 1—Mulford, 2"; 2—Colton No. 2 Rotary, ⅝"; 1—Stokes Rotary D, 1"; 1—Stokes Eureka hand, ½".
22—Dry Powder Sifters and Mixers, lab. size to 4000 lb.
2—Karl Kiefer Visco Piston type Jar Fillers.
1—Urie Universal Tube or Jar Filler, motor driven.
5—Pony Mixers, Day and Ross makes, 8, 15, and 40 gal.
2—200 gal. Glass Lined Jacketed Kettles; 2-250 gal. Agitated; 4—350 gal. jacketed.

MISCELLANEOUS—Large selection of: Glass Lined Storage tanks, Drug Mills, Pulverizers, Sifters, Colloid Mills, Filter Presses, Coating Pans, Pill Mass Mixers, Tanks, Agitators, Pumps, Boilers, Kettles, Ointment Mills, Grinders, Screens, Filters, Stills, etc. SEND FOR COMPLETE BULLETIN.

What have you for sale? Send us a list.

We Buy and Sell from a Single Item to a Complete Plant

Consolidated Products Company, Inc.

20-21 Park Row — New York, N. Y.

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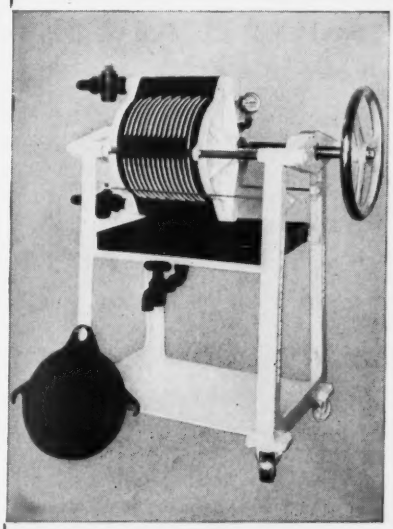
SAVE YOUR LIQUIDS FROM CONTAMINATION---USE HARD RUBBER



ERTEL HARD RUBBER FILTER

Write for particulars

The Ertel Hard Rubber Asbestos Disk Filter, used in conjunction with the Ertel Neutral Asbestos Filter Sheets, prevents your liquids from coming in contact with metal which might contaminate them. Ideal for drugs and pharmaceuticals.

The same in operation as the bronze models.

Built in sizes to handle from 5 to 30 gallons per minute.

ERTEL ENGINEERING CORP.

Dept. B. 120 East 16th Street — NEW YORK, N. Y.

THE *Right Combination* FOR YOU

MODEL S
Direct Drive for light and medium fluids

MODEL D
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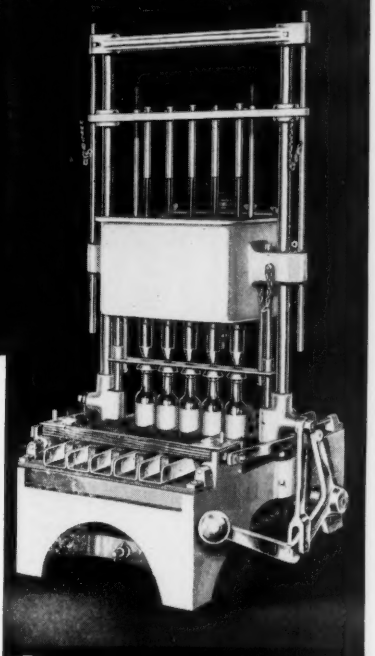

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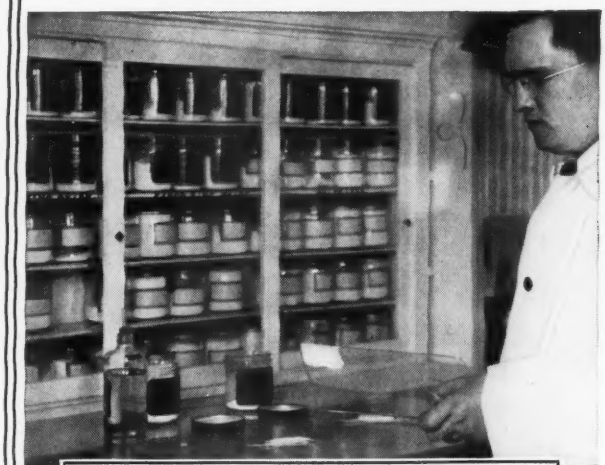
That Anaconda USP Zinc Oxide is Whiter and Brighter



MAKE THIS EASY TEST—Mix Anaconda USP Zinc Oxide with refined linseed oil or any other colorless vehicle and spread on a glass palette. Do the same with ordinary USP Zinc Oxide. Compare. See how much whiter and brighter Anaconda is, without the bluish or yellowish cast usually found in ordinary zinc oxides.

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Anaconda Zinc Oxides Cost No More

Anaconda's superior whiteness is due to its greater *purity*. Both Anaconda USP and Seal Grade Zinc Oxides are made from 99.99%+ Pure Electrolytic Zinc, converted into Zinc Oxide by the French Process.

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from mine to consumer

From mine to consumer means that Anaconda is able to control purity and uniformity of its Zinc Oxides at every stage of their production.

The COMPOUNDER'S CORNER

NEW SOAPLESS SHAMPOO COMPOUND

Under the name of Triton Suds, the Rohm & Haas Company, Philadelphia, is releasing to the cosmetic industry a new detergent agent for use in lathering soapless shampoos and other cosmetic products. As distinct from many other compounds of this type, Triton Suds, although patented by the manufacturer for his own protection, is available without restriction to all users.

The preparation is available as a thin grey paste which is easily diluted with water. A ten per cent. solution in water is perfectly clear and transparent.

A few words must be inserted here to clarify, if possible, a muddle which plagues much thinking on the subject of synthetic wetting, emulsifying, dispersing, detergent, etc. agents. These terms are not necessarily interchangeable; a compound may be a good wetting agent and be quite poor as an emulsifier, as we have found out at the cost of much labor. What we are after in shampoos is the utmost in useful detergent power, without by-effects to cause trouble. Soap has these by-effects which makes substitutes so welcome. In the presence of lime (and magnesium) salts, which make hard water, it forms alkaline earth soaps. These not only waste soap; they are sticky substances which deposit on the hair and deprive it of its natural luster and can be removed only by an acid rinse which breaks them down. Even pure water will not necessarily give a good cleansing with soap. Hydrolysis causes partial breakdown of soap with the formation of fatty acids which deposit on the hair in colloidal form and are difficult to remove completely by rinsing.

Synthetics available as detergents are limited to those whose use has not been restricted to a single large manufacturer. Triton Suds is stable to both acids and alkalies, and is resistant to high temperatures, which suggests possible use in the permanent wave process. The compound is proof against hard water; its calcium and magnesium salts are freely soluble in water and will therefore not deposit on the hair. Evidence is available that it is the most powerful commercial dispersing and deflocculating agent available and when properly used should cleanse even more thoroughly then other synthetic detergents. Since it will not dry to a hard film or powder, it has extremely high rinsability and will leave hair in beautiful condition.

In addition, Triton Suds is a powerful wetting and penetrating agent and should be especially useful in various pad cosmetics, both to facilitate penetration into the pad for its effect upon the skin.

Preliminary tests indicate that it is not irritating to the skin.

CLEANSING PADS

As we all now know, cleansing pads consist of thin flannel discs saturated with a liquid preparation with cleansing action. Obviously, a mixture capable of removing oil and dirt from the skin surface will have solvent power sufficient to remove sub-

"I think you need the vitamins."

S-5 and Color

For years we advocated the purification of all cosmetic colors. Now the law, S-5, the Federal Food, Drug and Cosmetic Act demands it. In approximately twelve months, certificate of all cosmetic colors of coal tar origin will be mandatory.

Don't leave for next Spring what you should do now. The Kohnstamm Laboratories are prepared to assist you with your color problems. Atlas Purified Cosmetic Colors are backed by the Kohnstamm guarantee. Providing the strongest protection the industry affords . . . freedom from concern and greater sales possibilities for your products.

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According to the Food and Drug Administration the use of the term "Russian" in connection with mineral oils coming from elsewhere than Russia, would be misleading and therefore violate the Federal Food and Drugs Act.

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Importers of Russian Mineral Oils

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stances used in the manufacture of the fabric disc. These textile processing compounds may be responsible for the residual odor occasionally reported following the use of the cleansing pad. The use of methyl parahydroxybenzoate has been recommended to overcome this problem. The compound apparently acts both as an antioxidant and as a preservative to prevent the generation of an unpleasant residual odor. The usual one-tenth to one-fourth per cent. on the weight of the liquid should be adequate.

ASTRINGENT DEODORANTS

Deodorants may be divided into two classes, the simple deodorants and the antiperspirants. The former grouping includes all those preparations which, by their antiseptic or other effect, merely deodorize perspiration for a time without stopping the flow. Active ingredients are so diverse in their nature that they can be chosen to be compatible with all types of bases and the popularity of this type of preparation may be largely dependent upon the attractive forms in which it is offered.

Antiperspirants, which by their astringent action stop perspiration in the region of application, can prevent the appearance of large and conspicuous moist areas in clothing and are often preferred. The early feeling that it is harmful to stop perspiration has been modified by the wider realization that perspiration stopped in one skin area will appear in another where evaporation is easier. The requirements for these astringent preparations include actual stopping of perspiration in the region of application for a longer or shorter period; minimum irritation (actual harmlessness must be a quality in all cosmetics that is always so far forward in the mind of the formulator as to require no additional emphasis); ease of application.

The aluminum salts have long been favored because of their effectiveness and their general low cost. They are astringents with a coagulating effect upon the skin that definitely retards and stops flow of perspiration. The chloride, and to a lesser extent the sulfate have been widely utilized in solution, but have one major shortcoming. Both of these compounds generate strong mineral acids, hydrochloric or sulfuric acid, which have a very drastic effect upon fabrics with which they come in contact. Choice is limited by the relatively limited solubility of most aluminum salts.

Recently we have advocated the use of aluminum acetate solutions for antiperspirant preparations, since the acid radical present is harmless. We fondly assumed that some perfumer might be able to cover the odor of acetic acid, which is stronger and worse than most perspiration, but have been disillusioned. The fact that acetic acid is volatile and persistent and that the aluminum ion is a powerful coagulant makes the problem virtually insoluble on an economical basis.

We looked further through our chemical handbooks and discovered that aluminum acetotartrate and the sulfocarbolate are both soluble in water. The first compound has a distinct acetic acid odor and was not examined any further. Aluminum sulfocarbolate, however, has manifest virtues. It is very soluble in water to give a clear or opalescent solution. It is completely odorless. By virtue of its acid radical it should have definite value as an antiseptic. There is no obvious reason why it should be harmful to fabrics. By analogy with the zinc sulfocarbolate, which had been advocated in the past, the aluminum compound should be of sufficiently low toxicity to be eminently suitable for antiperspirant use. Aluminum sulfocarbolate is being made by the Mallinckrodt Chemical Works, New York.

We have made a few experiments, but have so far not been completely successful in using this aluminum compound in cream bases of the vanishing cream type, since it has high coagulating and precipitating power. Effort in this direction, however, should repay the experimenter.

BENZOIC ACID PRESERVATIVE

The effectiveness of sodium benzoate as a preservative depends upon the acidity of the medium in which it is used. Benzoic acid solutions of varying strengths were adjusted to a definite pH by the addition of sodium hydroxide solution. The maximum effective strengths were determined using B. coli and Staphylococcus aureus as test organisms. At pH 3.5, 1/800 gm. per mil is bactericidal for B. coli and 1/900 gm. per mil for S. aureus; at pH 5, 1/20 gm. per mil is required for both organisms. Bacteriostatic action at pH 5 is obtained in concentrations of 1/5000 gm. per mil for B. coli and 1/3000 gm. per mil for S. aureus; at pH 7, 1/100 gm. per mil and 1/80 gm. per mil are required respectively. Solutions of sodium chloride, potassium chloride, calcium chloride, sodium nitrate and sodium sulfate are shown to be ineffective as bactericidal agents, except in concentrated solutions at pH of 5 and 6. Hence the relatively small number of sodium or chloride ions introduced in diluting the benzoic acid solutions does not affect the results obtained. *Goshorn, Degering, Tetrault, Ind. Eng. Chem. vol. 30, p. 646.*

SUN SCREENS

In order to protect the skin from the effects of the sun and ultra-violet rays, the use of oils, petrolatum, or pomades, is not very practical. It is preferable to utilize the solution of a very active product obtained by causing a substituted lactone of hydroxycinnamic acid to react on a tannate in such a way that the final product still contains free tannate, the latter possessing the property of thickening the outer layer of the skin. Use is made of the following substituted pyrones (substituted lactones of hydroxycinnamic acid): esculetin, umbelliferone, beta-umbelliferone acetic acid, beta-methylumbelliferone acetic acid, herniarin, daphnetin, chrysatropic acid, beta-methylumbelliferone, umbelliferone-alpha carboxylic acid, dimethylamino-b e t a-methylcoumarin, etc. The product can be prepared in solution in water, alcohol, ether, or glycerol. The solution containing 0.001 g. of pyrone to 1 cc. possesses, for a layer of 1 mm., a constant absorption of 70 to 75 per cent. Ex. 1: 8 p. of methylumbelliferone acetic acid, 4 p. of sodium tannate, 88 p. of 50 per cent. alcohol. Ex. 2: 10 p. of umbelliferone acetic acid, 3 p. of sodium tannate, 10 p. of glycerol, 72 p. of distilled water. *F. Ellinger, Swiss Patent 187,246.*

Dibenzalacetone absorbs ultra-v i o l e t rays better than any other product at present in use. In 0.01 alcoholic solution, a layer of 2 mm. thickness completely absorbs rays of wave-length from 2900 to 3000 A.U. This product, faintly yellow colored, is soluble in vegetable and animal oils, fats, waxes, and analogous synthetic products. For protection from the action of the sun the use of 0.5 to 2.5 per cent. of dibenzalacetone is effective. Ex. 1: Melt on a water-bath, 8 beeswax, 15 petrolatum, 10 spermaceti, 5 lanolin, and 55 almond oil; dissolve in this 1 to 3 dibenzalacetone and stir vigorously, adding a little borax solution. Perfume as desired. Ex. 2: Dissolve 0.5 to 2.5 gr. of dibenzalacetone in almond, olive, sesame or other vegetable oils; add mineral oil and a perfume. Ex. 3: Using suitable fats and oils, in which 1-3 per cent. of dibenzalacetone has been dissolved, a cream is prepared by emulsification in water. An absorptive agent soluble in water, such as aesculin or beta-umbelliferone acetic acid, may also be dissolved in the weakly alkaline aqueous phase. *E. Merck & Co. G. P. 652,961.*

UNSATURATED FATTY ACIDS AND ECZEMA

Linoleic acid is present to the extent of 5 per cent. of the total fatty acids in normal human serum and arachidonic acid to the extent of three per cent. The content of both these fatty acids is definitely diminished in children with eczema. In patients with active eczema which was clinically cured either by the internal administration of oils rich in the unsaturated fatty acids or by the local application of ointments containing crude coal tar or both, the arachidonic content of the serum was not increased, while the linoleic acid content was the same as that found in normal subjects. These findings indicate a possible reason for the low iodine number of the fatty acids of the serum in cases of eczema and further suggest that a disturbance in the metabolism of the unsaturated fatty acids may be one of the many factors at fault in this condition. *W. R. Brown and A. E. Hansen, Proc. Soc. Exper. Biol. & Med., vol. 36, p. 113.*

Perfumers Shelf

HELIOTROPE

HELIOTROPINE is very similar in odor to the natural heliotrope; the similarity is of the same nature as that between eugenol and blooming poppy. In spite of this resemblance, it is not possible to imitate heliotrope perfume by means of heliotropine alone. Many additions must be made in order to obtain a satisfactory product. The imitation of heliotrope is, in fact, one of the most difficult of the perfumer's problems. In the first place, heliotrope is only reminiscent of heliotrope and does not smell exactly like it; moreover, heliotropine is a solid without very strong odoriferous value. A solution of heliotropine in an inert solvent can not have the same odor intensity as, for example, ionone or benzyl acetate, since a solution does not contain 100 per cent. of active material.

If heliotropine is to serve as the base for a heliotrope perfume, its odor must be absolutely pure and must not suggest safrol, which is always the case with impure products. Heliotropine is nevertheless the only heliotrope odor produced on a large scale in the perfume industry. The compound responsible for the odor of the open blossoms is not known; it is probably not heliotropin, but a related compound or compounds. A sulfur compound similar in constitution to heliotropine has been suspected. Laboratory research has led to several other compounds which are said to be responsible for the true heliotrope, but these have not been produced commercially. Some of these heliotrope compounds are isobutyl-pyridine, anisyl formate, heliotropylacetone, p-methoxyphenylacetaldehyde, p-methoxyphenylmethylhydrocinnamaldehyde, p-methylhydrocinnamaldehyde, phenylethylmyrthenyl, p-methylresorcylaldehyde, p-methoxyphenylacetaldehyde, and the condensation product of anisaldehyde with ethyl p-aminobenzoate.

The perfumer must still depend primarily upon heliotropine for his heliotrope perfume. To give a certain intensity to the composition, other compounds must be added to the solution, and still others are required to make the imitation better. Vanillin, although it is also a solid, has far greater intensity than heliotropine; acetanisol, even with its slightly chemical elder odor, is useful; aubepine (anisaldehyde) is also useful. Many commercial products, with the word "concrete" in their names, are sold as heliotrope bases and generally consist only of mixtures of the above mentioned compounds. Another useful addition is Peru balsam, which softens and lightens the odor of heliotropine. Only the specially purified and concentrated balsam may be used for this

"No, a beauty mask is not permanent."

THREE POINTS
. . . *in a* LINE . . .

BY KEEPING three points in a line, the woodsman knows that he can set his course through the forest and avoid traveling in circles. Many an individual and many a business could avoid traveling in circles by adopting this same, simple rule.

By setting himself three worthy aims early in his career, the individual can give to his life direction and purpose.

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Three points in a line . . . . it's a good rule under any circumstance. We've applied it in a practical way to our own products by adherence to Quality, Reliability and Value, and we *know* that it works!

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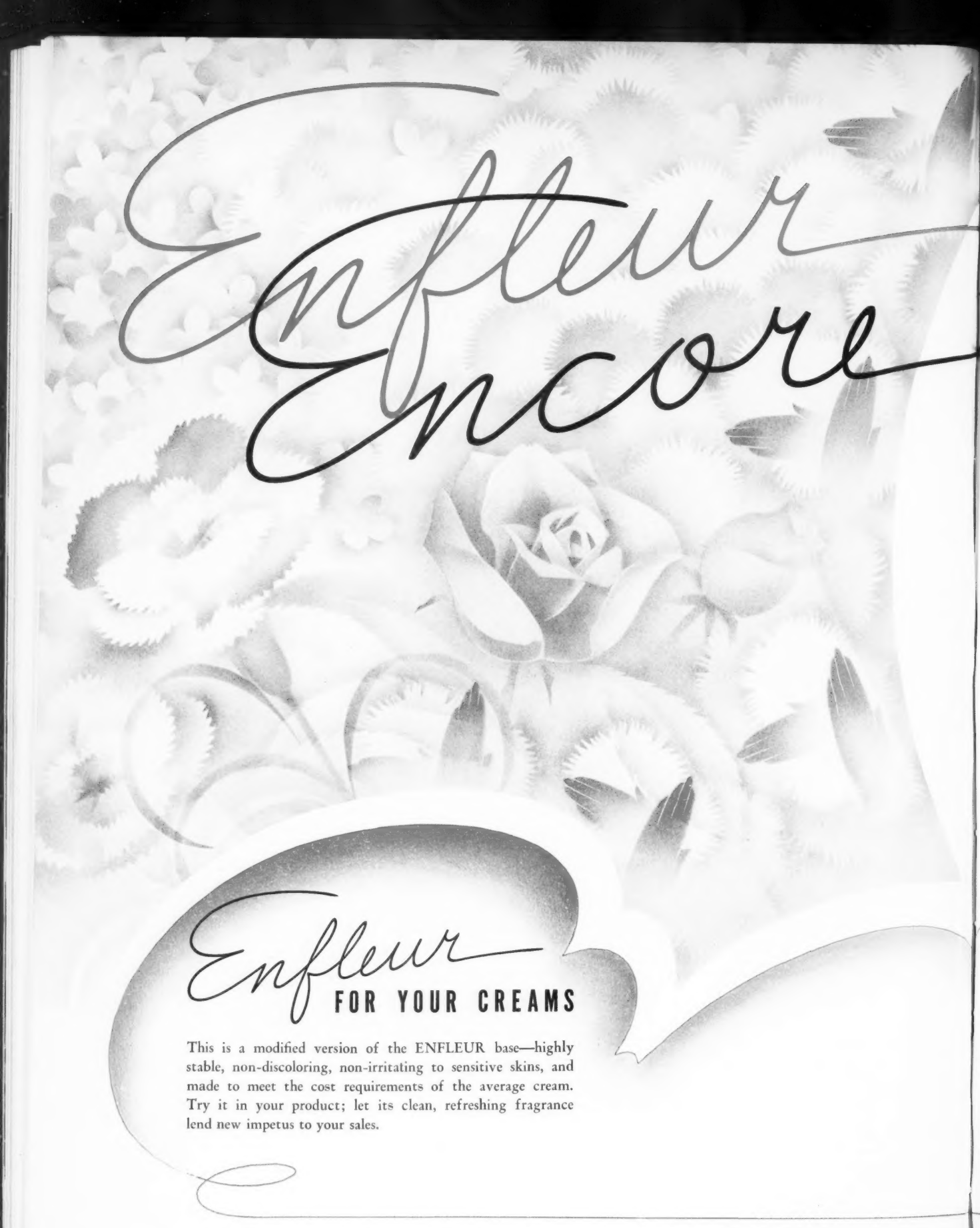

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ENFLEUR is less costly to use than many a cheaper product because so little goes such a long way. Its choice, skillfully blended ingredients make for intensity, stability and persistence—hence economy. It is one of our finest specialties! Why not let us send you a sample that you may judge its worth by personal observation.

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JASMINE, CHASSIS ..... **ROSE, BULGARIAN**
JONQUILLE, ENFLEURAGE ..... **SAGE, CLARY**
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purpose. It is known that this balsam contains a little farnesol, which is said to be the basis for lily of the valley and linden flowers. Use can also be made of cinnamyl alcohol and especially of cinnameine (benzylated cinnamic acid), ylang-ylang, and traces of benzaldehyde. This bitter almond aroma may also be added by using benzyl alcohol as a solvent for heliotropine, since oxidation by air always makes the solvent smell of bitter almonds. To project the flower perfume, very small amounts of phenylethyl alcohol and jasmin and rose may be used in addition to ylang-ylang. For the fresh and natural flower odor, use phenylacetaldehyde or its acetal or the tolylacetaldehyde known commercially as the elder aldehyde. A balsamic odor will be imparted by the use of Tolu balsam, especially the absolute, which has a very fine odor.

The pure heliotrope perfume is found naturally not only in heliotropium peruvianum but also in many other flowers whose odors, from the point-of-view of the perfumer, contain a large proportion of heliotrope odor. The most important of these is clove, which blooms in the spring and has a delicate and distinctive perfume. Still more similar is the spirea ulmaria which blooms in the summer on marshy prairies and on river banks. Bergenia crassifolia is often encountered in botanical gardens and has a mixed green odor of grass and heliotrope. The odor of clematis vitalba is a mixture of aubepine and heliotrope, while prunus padus has the odor of sour cherry and heliotrope. Finally, several orchids have a high proportion of heliotrope perfume in their odors: oncidium, lycaste macrobulbon, lycaste aromatica, dendrobium glumaceum, stanhopea tigrina, and stanhopea oculate. *Riechstoffindustrie.*

SANDALWOOD OIL

The yield of volatile oil in authentic sandalwood was found to vary considerably, being least in sandalwood chips, the amount in some instances falling below one per cent. This low yield in volatile oil in the chips is probably due, for the most part, to the inclusion of a larger proportion of sap wood.

The specific gravity of the volatile oil is sometimes outside the Pharmacopoeial limits (0.965 to 0.980 at 25° C.), values both above and below the specifications being noted. The optical rotation in the case of some specimens falls outside the official limits (– 15° to – 20° in a 100-mm. tube at 25° C.), value as high as – 22.50 being observed. The refractive index for the volatile oils from both the official and non-official varieties of sandalwood are essentially identical, the entire range lying between 1.500 and 1.509.

The specific gravity and refractive index are of little value for the detection of non-official varieties of sandalwood. The optical rotation, on the other hand, is particularly important. In the case of the volatile oils from the nine non-official samples reported not one possessed the optical rotation within the official limits, or within the limits of the volatile oils from the authentic sandalwoods. *J. F. Clevenger, J. Am. Ph. Assoc., vol. 27, p. 580.*

SYNTHESIS OF VITAMIN E

Synthesis of vitamin E was announced at the meeting of the American Chemical Society.

The vitamin was prepared artificially for the first time from a constituent of chlorophyll, known as phytol, and a second substance which does not exist in nature and had to be prepared synthetically in the laboratory.

No less than three different chemical laboratories in three different countries, the United States, Switzerland and England, have succeeded in synthesizing the vitamin, sometimes referred to as the "essence of fertility." The credit for priority goes to the Swiss workers, who beat the scientists of this country by announcing their synthesis three days ahead. The Americans, however, claim a purer product.

The announcement of the American achievement was made by Professor Lee Irvin Smith of the University of Minnesota School of Chemistry and his associates, Drs. H. E. Ungnade, W. W. Pritchard, J. W. Opie, S. Wawzonek, F. L. Austin and H. H. Hoehn.

The biological assays on the synthetic vitamin, known as alpha tocopherol, were carried out at the University of California by Dr. Herbert M. Evans, who originally discovered the vitamin in 1922, and Dr. Oliver H. Emerson. Physical and chemical studies of the synthetic product were carried out under Dr. R. T. Major in the laboratories of Merck & Co. at Rahway, N. J.

The Swiss scientists who achieved the synthesis three days ahead of the Minnesota group are Dr. P. Karrer, one of the world's leading authorities on the vitamins, and his associates, Drs. H. Fritzsche, B. H. Ringier, and H. Salomon.

Analysis of the vitamin E found in nature showed that at least three, and possibly a fourth, different types of this substance exist, These are known, respectively, as alpha, beta and gamma tocopherol. So far the alpha tocopherol has been synthesized, and work is now going on to synthesize the other two.

The tocopherols are generally extracted from wheat-germ oil and cottonseed oil. When they are removed from the diet of rats the animals become sterile. When concentrates of these substances are returned to the diet such sterile rats regain their fertility. This can be achieved with the synthetic substance as well as with the natural ones.

"It is not known with certainty," Professor Smith stated, "that the tocopherols will cure any cases of sterility other than those occurring in rats and induced by a deficiency of the vitamin. The work in this field so far has been handicapped by a lack of an adequate supply of the pure vitamin.

"But now, with a successful synthesis of the vitamin, a reasonable supply of the pure materials can be made available so that the clinical and other biological work can be put on a sound basis and can be vigorously prosecuted.

"Should the vitamin really prove to be a cure for many cases of sterility, it is easy to see the value to mankind, not only in human applications, but the enormous economic advantage to farmers and livestock growers in the treatment of sterility in farm animals, and in the increased fertility among domestic fowls.

"With two or three years of intensive laboratory work the whole vitamin E question should be settled in all its aspects. In another two months the University of Minnesota laboratory expects to have synthesized beta tocopherol, a second substance found in the natural vitamin."

The phytol, an alcohol occurring in chlorophyll, is used as the initial step in the synthesis. The other compound used is known as trimethyl hydroquinone, a synthetic substance.

SCLEROSING VEINS WITH SODIUM RICINOLEATE

Sedwitz and Steinberg find sodium ricinoleate efficacious for the obliteration of the saphenous vein following its ligation. A syringe filled with the desired amount (from 6 to 30 cc.) of 2 per cent. solution of sodium ricinoleate is used, the amount injected depending upon the case. This method of treatment was employed in thirty-one cases and produced complete obliteration of all varicosities of the great saphenous tree. *Amer. Heart Journal, vol. 15, p. 671.*

SILICA GEL OINTMENT BASE

Silica gel is prepared by adding, drop by drop with constant stirring, a commercial solution of water glass diluted with three times its volume of water to hydrochloric acid until the mixture assumes a vitreous appearance. The slightly alkaline mixture is filtered and washed rapidly. Triturate the gel with one-fourth its weight of glycerin to obtain a homogeneous product resembling soft paraffin which is stable for several months in a closed container. It readily absorbs vegetable oils and is miscible with a large number of medicaments, but not with hydrocarbons. As an ointment base the gel has the advantages that it is non-irritating to the skin, is non-greasy and readily be washed off with cold water. The effect of the base upon medicaments has not yet been investigated. *Peronnet and Genet, J. Pharm. Chim. Paris, vol. 26, p. 490.*

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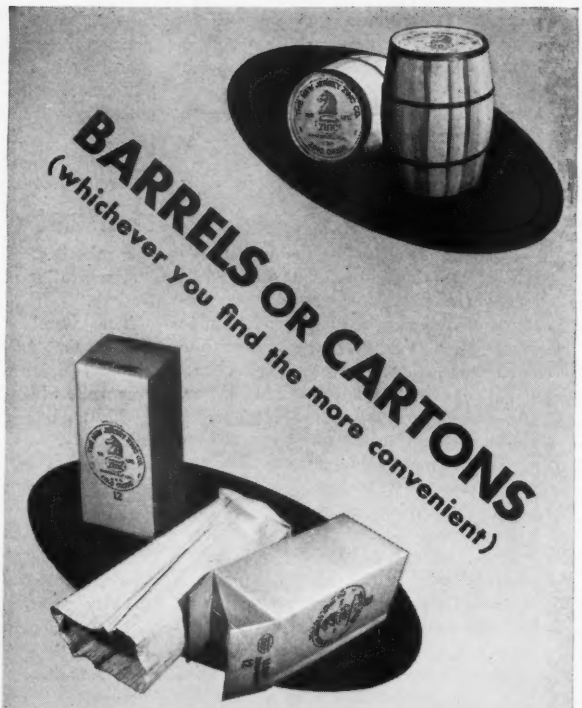

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Wintrup used zinc peroxide in treating ten cases of acute Vincent's infection, eight cases of chronic Vincent's infection, twelve cases of acute gingivitis, three cases of suppurating periodontoclasia and two cases of radiation necrosis. Zinc peroxide is quite stable and comes not as a pure salt but contains from 45 to 50 per cent. of zinc peroxide, from 35 to 40 per cent. of zinc hydroxide and from 10 to 15 per cent. of zinc carbonate. Only the "medicinal grade" should be used and it must be heated to 140 C. in quantities of not more than 500 Gm. for four hours, to effect sterilization, in accordance with the manufacturer's specifications. Zinc peroxide with 7.5 per cent. of available oxygen, nearly as much as sodium perborate, loses its oxygen slowly. Therein lies its great virtue for the treatment of oral infections. Zinc peroxide has a *p*H of 8.8 and remains stable over a long period, giving up its oxygen so slowly that great amounts of it can be utilized to permeate interstices, crypts and pockets, in which organisms associated with all types of gingivitis, pyorrhea, osteomyelitis and necrosis of the soft tissues abound. Further, the zinc oxide residue is bland and healing and this is an added desirable characteristic. It is recommended that the zinc compound be mixed with water to form a creamy paste. One-half teaspoonful for each application is sufficient. This paste is applied by the patient with his finger or on a sterile swab and massaged gently into the interproximal spaces between the teeth and along the gingival margin. The zinc peroxide thus is placed directly in contact with the tissues and remains there for a long time, giving off its oxygen. No effort should be made to rinse the mouth and, as the powder is slowly mixed with the saliva, the patient should expectorate this residue. *Surgery, vol. 4, p. 124.*

TOXICITY OF PROPYLENE GLYCOL

In rats the acute Average Fatal Dose of propylene glycol was found to be 33.5 Gm. per Kg. orally, 22.5 Gm. subcutaneously, 14 Gm. intramuscularly and 6.8 Gm. intravenously. These figures are in agreement with those reported by other authors, with the exception of the intravenous fatal dose, which is somewhat less than half that reported by other authors.

In rabbits the acute Average Fatal Dose on intravenous administration was found to be 6.5 Gm. per Kg.

The chronic toxicity of propylene glycol was studied by the administration of the material to growing rats by way of their drinking water. Concentrations of 3% or less caused no appreciable change in rate of growth. A concentration of 10% caused a temporary slowing in rate of growth which lasted for about ten days. Rate of growth after this initial slowing became

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essentially normal. No significant changes were found on microscopic examination of organs of these animals sacrificed at the end of the experimental period of 100 days.

Hematuria was observed following the intravenous administration of sublethal doses of propylene glycol to rats. Hemolysis was produced *in-vitro* by both diethylene glycol and propylene glycol in concentrations greater than 0.14 molar. This *in-vitro* action seems to be due to the dilution of isosmotic NaCl solution with the osmotically inactive glycol solution, rather than to a specific hemolytic action of these glycols in the dilutions used. *J. H. Weatherby and H. B. Haag, J. Am. Ph. Assoc. vol. 27, p. 466.*

CYCLOHEXYL-ETHYL-TRIAZOL AND SCHIZOPHRENIA

Mayer-Gross and Walk used a 5 per cent. solution of cyclohexyl-ethyl-triazol for the induction of convulsions in the treatment of thirty-three cases of schizophrenia. Behrens, Dinkler and Woenckhaus found the compound to have advantages over the 25 per cent. solution of pyridine betacarbonic acid diethylamine and metrazol. Convulsions were readily induced by quantities of the compound ranging from 0.7 to 2.5 cc. given intravenously. The majority of patients require between 1.2 and 1.8 cc. The type of convulsion produced is, with correct dosage, the full major epileptic fit. The excretion of triazol appears to be somewhat slower than that of metrazol; consequently the injection need not be given with any special rapidity, though the smallness of the dose makes it easy to do so. Should the amount given fail to induce a fit, a supplementary dose of from one-third to one-half the original dose is sufficient to bring on the fit if given up to two minutes after the original injection. Sclerosis of the veins has not occurred in any case. When given intramuscularly, approximately twice the intravenous dose is required, though there are individual variations and it is best to begin with a somewhat smaller dose. After the fit, recovery is usually rapid, but there may be a short period of restlessness, as with metrazol. Routine premedication with 1/100 grain of atropine, given one hour before the treatment, completely abolishes vomiting. Amnesia for the effect of the drug appears to be more complete than with metrazol. *Lancet, vol. 1, p. 1324.*

ANTISPASMODIC DRUG

Einhorn substituted diphenylacetyldiethylaminoethanolester hydrochloride for tincture of belladonna in the treatment of eleven cases of duodenal ulcer, one of gastric ulcer, one of diverticulum of the duodenum, one of cardiospasm, three of cholecystitis, five of colitis, one of hyperacidity and one of acute intestinal obstruction. All the patients were free of side effects, such as dryness of the mouth, dilation of the pupils, palpitation and irregular pulse. No definite relief of pain was reported in the cases of cholecystitis. No results were obtained in the cases of cardiospasm. Good results were obtained in the remaining cases. The patients were relieved of their pain, although this relief cannot be attributed entirely to the drug, since it was used in conjunction with other medication (diets, alkaline powders, and the like). Excellent results were obtained in certain cases in which hiccup was present. This complaint disappeared completely about twenty minutes after the drug was administered intramuscularly. There were no toxic effects, even when the drug was administered over a long period. *Amer. J. Dig. Dis., vol. 5, p. 77.*

VITAMIN C IN ARTHRITIS

Rinehart and his collaborators analyzed the blood for vitamin C of 120 medical students as "normal" controls, fifty-eight patients with more or less classic rheumatoid arthritis, thirteen with gonorrheal arthritis and twelve with hypertrophic arthritis. They find that the level of the cevitamic acid of the blood plasma during fasting is almost uniformly lowered in rheumatoid and rheumatoid types of arthritis. In the majority of cases the blood level rises after the administration of vitamin C. Usually this rise is delayed. These data indicate the existence of vitamin C deficiency in arthritis of this type.

NEW TYPE INSULIN

Umber and his associates say that on the basis of clinical experiences with the various types of protamine insulin and protamine zinc insulin they are able to corroborate the effective action of these preparations and their superiority over ordinary insulin. They think, however, that the addition of protamine to the insulin may elicit hypersensitivity because protamine is a foreign protein. In this connection they point out that, according to Joslin's observations, the addition of protamine may lead to local and general irritations. It was their aim to find an insulin with a good depot action that would be free from protein or its decomposition products. They experimented with various depot insulins that were free from an admixture of protamine. Finally a preparation was found that was tolerated without irritation and the protracted action of which was at least equivalent to protamine insulin. In this preparation the protracted action is obtained by the addition of a synthetic cyclic compound, a quinoline preparation. Trials with this insulin on seventy-five patients with diabetes mellitus revealed that it had a good depot action and was well tolerated. Its protracted action corresponds to that of protamine zinc insulin. Since the protracted action of the new insulin can be regulated, further improvements may be expected. *Klin. Woch. vol. 17, p. 433.*

DIHYDROTACHYSTEROL AND PARATHYROID TETANY

With small doses of dihydrotachysterol taken orally the symptoms of hypocalcemic tetany can be entirely relieved and the blood calcium can be maintained at normal levels. Larger doses are required if no calcium is given in addition to that normally contained in the diet. Small doses of calcium salts by mouth cause remarkable and prompt rises in blood calcium when the patient is receiving dihydrotachysterol. For the relief of the acute symptoms of hypoparathyroidism the methods of choice are the intravenous injection of calcium and the intramuscular injection of parathyroid extract. Parathyroid extract, however, loses its effect as treatment is continued and is not satisfactory for the treatment of prolonged tetany. Dihydrotachysterol is the only therapeutic measure to yield excellent results in treatment of chronic tetany. *C. M. MacBryde, J.A.M.A., vol. III, p. 304.*

MONOLATE

Monolate, a 5 per cent. solution of monoethanolamine oleate in benzyl alcohol is analogous in action to sodium morrhuate. It has proved valuable clinically in over five hundred cases and is recommended for the treatment of varicose veins by injection. *S. T. Glasser, Amer. J. Surg., vol. 39, p. 120.*

COD LIVER OIL FOR ULCERS

Brandaleone observed two groups of diabetic patients; one a control group of eleven patients who received routine foot care (article on procedure abstracted in *The Journal* Feb. 27, 1937, page 760) and group 2, consisting of twenty-one patients who had received routine foot care for a period of from one to 136 weeks when cod liver oil was applied locally to the lesions. These patients may be considered as their own controls during the period prior to the use of cod liver oil. Of the twenty-one lesions in the control group of eleven patients three were unhealed, nine improved, one healed completely and eight recurred after from thirteen to thirty-two weeks of treatment. Of the twenty-one patients treated with cod liver oil, only one failed to show complete healing. The average time in weeks required for complete healing of the ulcers, in the twenty cases in which healing occurred, was 10.1 weeks. The average duration in weeks of the same ulcers, prior to cod liver oil therapy and during a period of routine foot care, was twenty-four weeks. The healing that occurred resulted from a rapid increase in epithelial tissue. As this took place the tissue assumed a healthier appearance and the uneven margins smoothed out. *Am. Surg., vol. 108, p. 141.*

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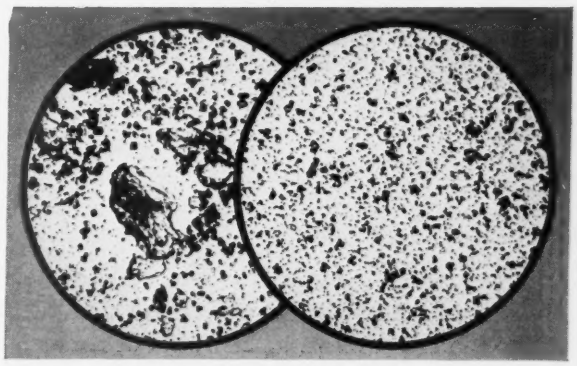

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READERS'

VEGETABLE OILS: I had a very kind and helpful reply to some questions I sent your Legal Dept. and wish to thank you. Could you give me your opinion of the comparative merits of Refined Grapeseed oil and the other vegetable oils? In the two cold creams I am now making, I am using absorption base, with wax and vegetable oils. For a cleansing cream I had thought I would have to use mineral oil, because of cheapness, though I would sooner be able to advertise that I used only vegetable oils. I have been told that the Refined Grapeseed oil is as good as Oil of Sweet Almonds, which I use in my best cream, and much cheaper. I thought it might be well to use it in the cleansing cream, or in combination with Peach Kernal Oil in a dry skin cleanser. I will aporeciate any information or references on this matter. Sioux City.

Any vegetable oil of suitable physical properties and good stability can be satisfactorily utilized in cosmetic manufacture. If you find, therefore, that a vegetable oil submitted to you will stand up without becoming rancid and has satisfactory color, odor and viscosity, there is no reason why you cannot use it in your products in place of more expensive oils.

PRESERVATIVE: We have been using sodium benzoate for the preserving of a gum karaya wave set solution, but that alone does not keep the solution from molding. Would appreciate any information you could give us. Denver.

Sodium benzoate is not a good preservative except in acid media where it has been partially or wholly transformed into benzoic acid. Esters of parahydroxy benzoic acid, especially the methyl ester, have been used successfully in stabilizing gum karaya solution.

SOAPLESS OIL SHAMPOO: One of our customers is anxious to make a soapless oil shampoo. They have asked us to tell them which sulfonated oils besides olive or an olive teaseed blend will make up into the following finished shampoo. About 50% by volume water, 25% by volume white oil and the balance sulfonated oil. They would want this finished shampoo, as I understand it, to have a fairly low cold cloud point and to give a clear solution in the following proportions.

One part oil to one part water
One part oil to four parts water
One part oil to nine parts water

They would like these solutions to remain clear for twenty-four hours. If you know of any such sulfonated oils, will you please write us? Chicago.

To our knowledge, sulfonated castor oil is used more frequently than sulfonated olive oil in the formulation of soapless shampoos. I do not see how it would be possible to make a mixture with as much water and oil as you specify and which would still be clear.

FEMININE HYGIENE CREAM: I would appreciate any formula information you can supply on a Feminine Hygiene jelly containing as its main active ingredient trioxymethylene in a vanishing cream base. Montreal.

Without any assurance that it will actually be effective, we offer you the following suggestions for the formulation of a trioxymethylene vanishing cream for Feminine Hygiene.

Stearic Acid	20.0
Potassium Hydroxide	1.0
Trioxymethylene	3.0
Glycerin	5.0
Water	71.0

This is to be made in the usual way. Melt the stearic acid, dissolve potassium hydroxide and glycerin in water, heat, add paraformaldehyde, emulsify stearic acid.

CLOUDY PERMANENT WAVE SOLUTION: We would like information on an oil which is emulsifiable into cold permanent wave solution and will give a good creamy white, stable emulsion. Chicago.

A mixture of equal parts of sulfonated castor oil and mineral oil may give you the cloudy emulsion that you desire. Another type mixture can be made by mixing oleic acid with mineral oil.

STATISTICS: Many, many thanks for the three issues you sent us. We note on reading these issues that you give the wholesale value of cosmetics sold as of May, 1938, in the May issue. Could we see this chart brought up to date? What would be the retail value of cosmetics sold by years for 1935-36-37, and estimated value for 1938? In these figures, what items go to make them up? In your July issue, page 41, there is a splendid article on the calculation of season variations on the sales of toilet articles and drugs, by the Federal Reserve. In the preparation of merchandising campaigns on beauty preparations for the face . . in your opinion does the sales curve on facial preparations follow the monthly sales as outlined by the study of the eleven year period, which you have made? Philadelphia.

The last figure we have available for the wholesale value of toilet preparations is $180,735,000 for the twelve month period ending July 1938. Approximate retail values for full years are $287,000,000 for 1935, $335,000,000 in 1936, $384,000,000 in 1937 and $361,000,000 in 1938, at the present rate. The items included in these figures are those listed in the "Census of Manufacturers," under perfumes and toilet preparations, and in addition include shaving preparations. We are glad that you found the article on seasonal variations of interest. We do not believe that facial preparations follow exactly the same trend as the industry as a whole, since obviously, they do not enjoy the large boost in sales at Christmas that perfumes and similar gift items have. It should be safe to assume that business is off in these products during hot summer months.

QUESTIONS

WAX NAIL POLISH: We have been trying to make a liquid-wax polish that will dry to a high gloss. There are several of these wax in water solutions on the market but we cannot get a true water solution of Carnauba or Beeswax that even resembles them. All we get is a milky emulsion which is all wrong. This should be translucent and dry to a real shine. Your help would be appreciated. Minneapolis.

The product you describe sounds interesting, but we have not come across it. If you will send us a sample, we will be glad to try to express our opinion as to the method of making similar products.

CONCENTRATED MOUTHWASH: I have been making a concentrated mouthwash consisting of a high proportion of essential oils and antiseptics dissolved in alcohol. This is to be used by pouring a few drops into a larger volume of water. However, a milky solution is supposed to result, but my product with water soon shows separation of a top layer of oil. Since this gives a non-uniform dilution which may not provide proper antiseptic value, can you please tell me how I can overcome this difficulty and make a reasonably stable emulsion? New York.

The highly insoluble oils used will naturally separate out when the alcohol used to keep them in solution is substantially diluted, but you are obviously providing no means of keeping the precipitated oils in their original droplet form. An emulsifying agent must be present in the original solution to prevent the droplets from joining again. Sulfonated castor oil should serve your purpose well and triethanolamine oleate has also been used successfully for the same purpose. These suggestions are obviously modifications derived from the formulation of bath oils which should act in a similar way. We cannot tell you the exact proportions of emulsifier to use since that will depend upon the type and amount of oils used. Mix the active ingredients with the emulsifier and then dissolve in the alcohol. A little experimenting with different quantities of emulsifier will soon tell you the correct amount to be used.

IRRADIATED FACE CREAMS: We are very much interested in the ultraviolet irradiation of face creams. Kindly advise us as to the best book or books dealing with this subject and refer us to the leading American firms supplying the equipment. Mexico City.

We know of no book on the subject of methods of irradiation of face creams by means of ultra violet light, but one of the companies making irradiation apparatus can probably help you out with respect to the type of equipment required. Single ingredients, rather than the whole cream are generally irradiated to give the product you are interested in.

LIQUID ROUGE: We are interested in manufacturing a liquid lip rouge. We would appreciate any information and formulas that you can supply us. If this item is of an indelible nature, perhaps a liquid remover should be manufactured as a companion item. Los Angeles.

Liquid rouge can be made by simply dissolving a water soluble eosin in water. Use a small percentage of gum to thicken the solution so that it will apply more readily. The liquid remover can be pure alcohol.

SHAVING PREPARATIONS: I have been experimenting on different ideas for a preparation to apply on the face before shaving. I am bent on getting a liquid that will toughen the face and soften the beard. Most people use wafer blades and they have a tendency to scratch the face. I have used witch hazel which toughens the face but have never gotten anything that mixes with it that softens the beard. Could you tell me what those brushless shaving creams have that soften the beard and could it be combined with witch hazel or something else to get the effect I want? I put a little brushless cream in witch hazel but didn't get the effect. I will appreciate any suggestions you can make. Dallas.

We are very much afraid you have set yourself a really difficult problem in making a combination that will toughen the skin and soften the beard. Since you find that witch hazel toughens the skin, it might be possible for you to add some wetting agent. Of course, you might be able to get the same effect if you were to use a wetting agent and not a skin toughener, but a small amount of anesthetic such as ethyl animobenzoate, which would lessen the feeling of irritation on the skin.

WATER SOLUBLE PERFUMES: We would appreciate it if you would kindly give us some information in your "Readers Questions" section regarding the preparing of water-soluble perfumes. The writer, of course, is aware of the fact that these special kinds of perfumes are prepared and sold as such by most of the leading essential oil houses in the United States, but being too far away from them it is not always convenient to apply to them when we are in a hurry and have to furnish special types of odor in alcohols, hair-water, etc., We happen to know that perfumes are made water-soluble by means of special bases, the preparing of which is described somewhere in literature. Could you supply us with sufficient information that will enable us to make up such base ourselves? San Juan, P. R.

As far as we know, water soluble perfumes consist of essential oil mixtures from which the highly insoluble terpenes have been removed. Even so, the products often have only limited solubility which can be improved in some cases by the addition of sulfonated oil. A better way of attacking this problem is probably through the use of water-soluble aromatics to make a synthetic mixture whose solubility will depend upon the original solubility of the ingredients.

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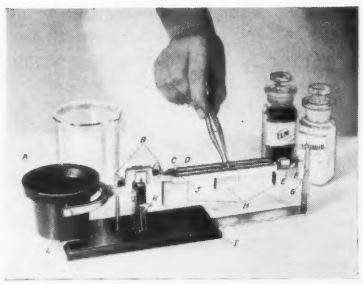

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Buchu Leaves 3c
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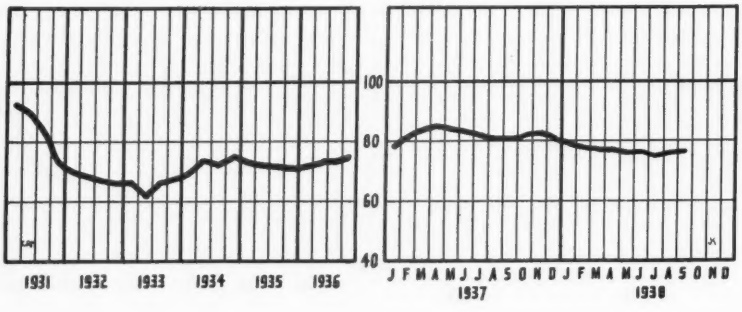
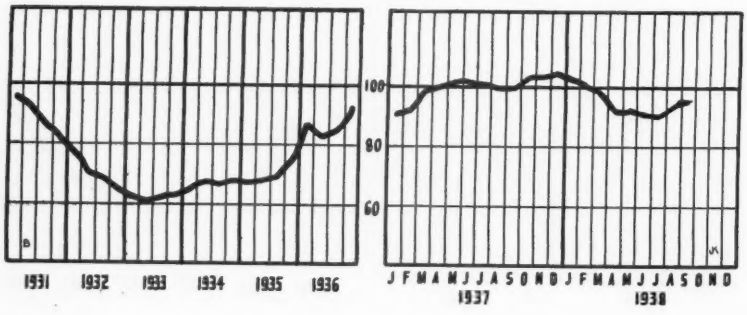
Cedar Leaf Oil 10c
Colocynth Pulp 1c
Gentian Root 1c
Golden Seal Root 25c
Hemlock Oil 10c
Kamala 3c
Lemon Oil, Italian 20c
Lime Oil, Dist. 20c
Redist. 50c
Mustard Artificial 5c
Orange Oil, American 20c
American Dist. 25c
W. Indian 5c
Rhubarb Root HD 3c
Safrol 3c
Spruce Oil 10c
Wormwood Oil 25c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



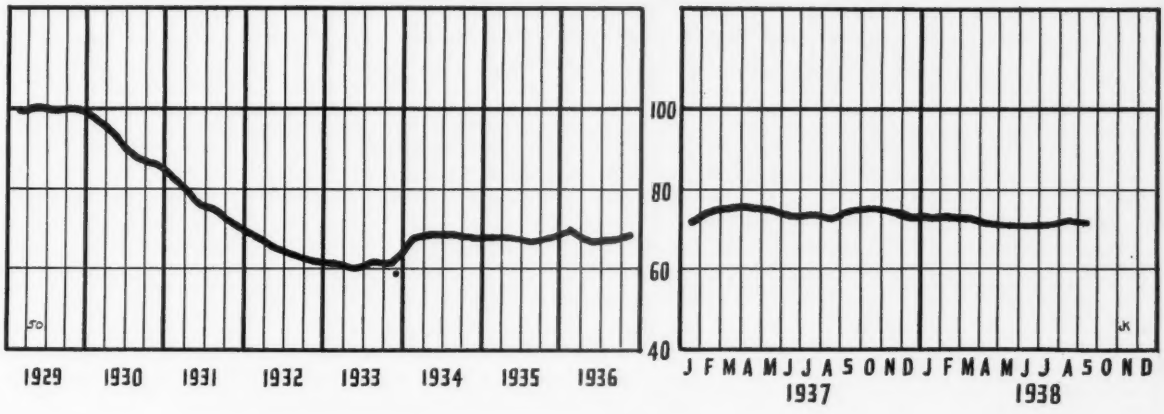
The cosmetic raw materials index increased slightly to 77.0. Balsam Copaiba increased from 24 to 29 cents; candelilla wax was one-half cent higher at 15½ cents; Japan wax increased three-fourths of one cent to 9¾ cents. A decline of 5c per pound in the spot market price of natural menthol came too late in the trading period to be recorded in the index.

15 Botanicals—Weighted Price Index. 1926 = 100.



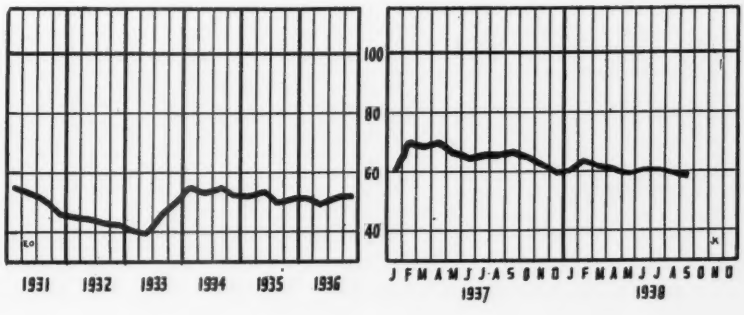
Botanicals averaged higher in price, the index increasing from 94.3 to 95.6. Agar declined from 90 to 85 cents; belladonna was one cent lower at 13 cents; buchu was three cents lower at 38 cents; cascara sagrada rose from 9 to 11 cents; gentian declined from 9 to 8 cents; ipecac rose 10 cents to $1.10; rhubarb declined from 34 to 31 cents.

50 Raw Materials—Weighted Price Index. 1926 = 100.



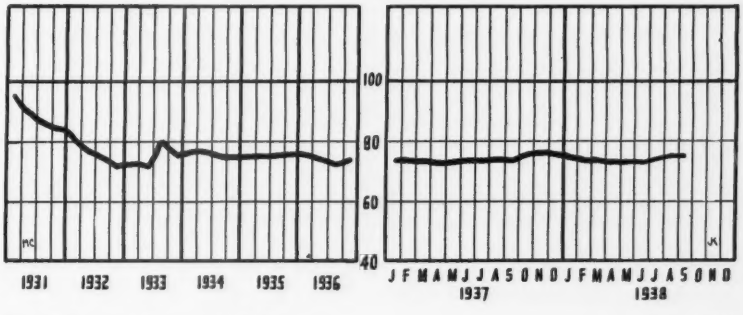
Because of lowered essential oil prices, the 50 commodity index declined slightly to 72.0 for September, compared with 72.5 for the preceding month. Many unsettling influences appeared during the current period under review, the chief of which was the European crisis over Czechoslovakia. The threat of war not only created anxiety regarding future shipments of raw materials from Central Europe but drew vast man power out of industry during the harvest season.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oil index of prices dropped from 59.9 to 58.2. Anise declined 10 cents to 75 cents; cassia declined from $1.00 to 85 cents; lemon oil dropped 20 cents to $3.15; lime oil dropped from $8.00 to $7.50; peppermint oil was 10 cents higher at $2.20. Competition between Mexican and West Indian producers of lime oil continued to unsettle the spot market.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index remained stationary at 75.0. Mercury metal declined from $79.00 to $75.00 a flask. The situation in mercury was somewhat contradictory. Heavy fighting in Spain for possession of the Almaden mines may eventually result in the Franco Government coming into control which might revive the Mercureo Europeo. Eventual disposition of the 2500 flasks of mercury purchased by a California bank was still uncertain and caused some unsettlement of the market.

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PEPPERMINT OIL

The spot market for peppermint oil is firmer but there has been a decline in the primary market from the high levels of a few months ago. Preliminary reports on this year's production indicate a smaller crop but the carryover is such that the total amount of oil available for consumption during the next twelve months will be more than ample.

Production of peppermint and spearmint oil in the five states (Indiana, Michigan, Ohio, Oregon and Washington) which produce oil in commercial quantities is estimated to be 738,000 pounds, according to a report issued by the United States Department of Agriculture. This is 17 per cent. less than the 885,000 pounds produced in 1937, and 15 per cent. smaller than the 1929-36 average of 871,000 pounds.

Acreage in Indiana, Michigan, and Ohio has been reduced sharply from last year. Oregon and Washington, on the other hand, report small increases over 1937. For the five states as a whole, acreage has been reduced 13 per cent. from last year, or 28,000 acres this year compared with 32,100 acres in 1937.

Winter killing frosts, disease and insects have resulted in light yields in Ohio and Indiana. Smaller yields than a year ago are expected in Oregon and Washington where dry weather has damaged the crop. For the five states the indicated average yield of 26.3 pounds compares with 27.6 pounds in 1937.

CAMPHOR OILS

Camphor oils showed considerable strength during the past month. Camphor sassafrassy advanced on spot to a range of from 21c to 24c per pound, being up 4c per pound, while the white oil advanced 1c to a range of from 18c to 22c. Related products such as safrol and artificial sassafrassy oil were materially firmer. As a matter of fact this condition was true of practically all raw materials from Japan where it is understood strict Government supervision of exports exists.

Of interest at this time is reports that the Government of Madras in India is investigating possibilities of developing camphor plantations in the Presidency with a view to making the manufacture of camphor and camphor oil a village industry. A camphor plantation has been started on an estate in the Nilgiris and the samples of the crude camphor and camphor oil produced have been submitted to the Government for analysis. The Forest Department of the Government will direct the surveying of the camphor areas and the laying out, etc., of the camphor plantations.

VANILLA BEANS

Factors in vanilla beans were somewhat concerned as developments continued to favor an advancing market. Good quality Bourbon beans are very scarce and a moderate shortage is expected to prevail for two or three years. The price range is now from $3.90 to $4.25 per pound as to quantity and quality.

The export tax of 12 per cent. on all Mexican products now in effect has materially strengthened the market for Mexican vanilla. It was again necessary to advance spot prices for these grades. Cut beans are currently offered at from $3.75 to $4.00 and whole beans at from $4.50 to $5.00.

It is the general consensus of opinion that all grades of vanilla are in sufficiently small supply so that further advances would be likely upon the development of any exceptional buying. It was suggested that the logical policy for buyers to pursue would be to cover requirements for several months and then take stock as offered. This would prevent a runaway market.

LIME OIL

Lime oil continued weak with another sharp decline noted in the spot market. Prices for distilled oil now range from $4.50 to $5.25 per pound with expressed offered at the lower levels of from $7.50 to $8.00. This is the lowest level at which expressed oil of lime has sold in many years and comes at a time when consumption should be greatest.

The reason for the pronounced weakness in lime oil is undoubtedly due to competition between West Indian and Mexican producers. Mexico has come to the fore in the past few years as an important factor in this item. They have a distinct advantage in low labor costs over the older producing centers and they seem determined to avail themselves of this opportunity to establish Mexican lime oil in the world markets.

The Mexican producers are unfortunately confronted with the recently enacted export duty of 12 per cent. on all products from that country. This may retard their policy of lower prices as the enactment of this law should increase the shipping price of lime oil by about 50c per pound. It is still possible, however, that production costs in Mexico are sufficiently low to enable shippers to absorb this export tax.

Quicksilver, the raw material for the important group of mercurials, continued its downward trend into the current trading period with the flask price now at $75.00. Developments in the various producing areas during the past few months have been particularly interesting as results will materially affect the future price trend of mercurial salts.

CITRUS OILS

Distributors of California Exchange orange oil announced rock bottom prices for this material at 75c per pound in 25 lb. cans for the coldpressed sweet and 50c per pound in 25 lb. cans for the distilled oil. Contracts at these levels are being written for six months. Other factors are offering the oil of independent producers as low as 70c per pound for the coldpressed and 50c for distilled.

There were indications that the market would probably firm up at these levels if for no other reason than that prices are so exceptionally low. Other than that there is nothing in the picture as a whole which would indicate anything but a buyers market for some time. There is an ample supply of domestic oil and large quantities of low cost African oil. West Indian orange oil was also lower at a range of from $1.95 to $2.00 per pound. The price of Italian material alone hinders its sale because the price is now so much higher than the domestic material.

Italian lemon oil declined during the past month with the new price range now at from $3.15 to $3.90 per pound. This compared with the very steady market for California lemon at $2.50. The price differential between the two oils probably accounted for the steady movement of the home product.

Bergamot oil remained under strict control at the previously quoted price levels of from $3.75 to $3.80 per pound.

COD LIVER OIL

The consuming season for cod liver oil will soon be under way. Indications point to a firm market throughout the Winter months. Although the total catch for all Norwegian cod fisheries this last season was the largest since 1932, livers were small, but yielded oil with high A and D vitamin content. Statistics reveal that the season's oil production aggregated 1,855,662 gallons, compared with 2,022,697 in 1937. Most producers are holding stocks awaiting the return of American buyers at which time prices are expected to advance in Norway. Stocks in the hands of exporters are stated to be small. Shipments of medicinal oil from Norway continued small during the Summer months amounting to 39,500 gallons in June, compared with 72,950 in June 1937. Demand from Europe, however, was good.

ALOIN

The market for aloin was again sharply higher with the new range fully warranted by the situation in the raw material. From $2.55 to $2.65 was asked on spot and indications pointed toward still higher prices. A report from the Netherland West Indies indicates that labor scarcity affected the new crop, collection of which began in April.

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MENTHOL

The spot market for natural menthol is still in the doldrums as far as consumer demand is concerned. The fact of the matter is that manufacturing consumers are not interested in this item at present price levels. For the most part the larger consumers are sufficiently well stocked to carry them through next Winter if necessary. Others indicated a renewed interest in the synthetic material.

In spite of this condition the Japanese market remained unchanged. There was no reduction in shipment quotations and as a result the spot quotations continued at the previously quoted range of from $3.20 to $3.30 per pound. The Japanese market is under strict Government control and, although carryover stocks will prove heavy and a new crop will shortly be harvested, there are no indications that the Japanese will do other than sit tight.

There was no information available regarding the new crop of Japanese peppermint. The Government discontinued reports of production some time ago and no estimates have been received here from factors abroad. However, a report credited to the office of the American Commercial Attache in Tokyo indicates that the next peppermint oil crop and the yield of menthol available for export will in no way be affected by current military activities. The peppermint crop of Hokkaido and other parts of Japan is harvested in August and September.

VANILLIN

Prices were again reduced with guaiacol vanillin lowest at $2.00 per pound and the eugenol variety minimum at $2.10. The latest decline was caused by the continued keen competition between leading manufacturers.

CASCARA SAGRADA

Cascara sagrada advanced 2c per pound during the current trading period with the spot price range now at from 12c to 13c per pound. The general feeling in this market was that consumers will have to pay more for this item than they expected. Production has been purposely kept down to the point where it is anticipated this years crop will be the smallest on record. There is, however, a good supply of one year old stock and it is this material that is now being offered. Prices for shipment from the Pacific Coast are several cents per pound higher than the lowest prices named earlier this season.

ERGOT

This important drug is still subject to conditions that when fully developed may considerably change the present picture of the market. The market is on the firm side as no normal offerings of new crop have been reaching this market. Shippers have very firm views and it is generally conceded that new crop prices will be influenced by the Franco Government in Spain.

ROSE OIL

Rose oil production in Bulgaria is estimated at 2,200 kilograms for the current season, compared with an output of 2,850 kilograms in 1937. This estimated decline, however, is not expected to disturb the market as carryover stocks being held by the Agricultural Bank of Bulgaria are reported at several thousand kilograms.

EPHEDRINE

The market for ephedrine was still on the easy side since competition remained a constant factor when important sales were in prospect. Not all sellers met the last decline but may eventually be forced to do so because of the competitive factor.

Imports of ephedra vulgaris (ma huang) aggregated 76,740 pounds in June, bringing the total for the first 6 months of the year to 831,281 pounds, which compared with receipts of 399,891 pounds in the first half of 1937. An interesting table of imports is listed below:

UNITED STATES IMPORTS OF EPHEDRA VULGARIS (MA HUANG)

	June 1938		*First half 1938*	
Country	*Pounds*	*Value*	*Pounds*	*Value*
China	22,340	$1,475	213,928	$15,602
Japan	54,400	3,936	161,518	10,808
India	.....	.....	446,350	29,197
Spain	.....	.....	9,485	544
Total	76,740	$5,411	831,281	$56,151

OIL PETTIGRAIN

A decline was noted in this item making the new range inside at 95c per pound. The output of pettigrain oil, which is Paraguay's eighth most important export crop, varies with labor demands in other fields, as wages paid in this industry are low, and unacceptable to many workers when employment can be obtained elsewhere. Pettigrain oil is distilled in Paraguay from the leaves of the bitter orange tree, which grows profusely throughout the country. Plants are generally small—one with an output of 1,000 kilograms of oil in one season is considered large. The distilling season runs from March through October. Traveling buyers, generally agents of the more important shippers, gather oil from the widely separated plants for shipment to Asuncion. Independent buyers dispose of their purchases to the highest bidder in the same city. Exports of this oil from Paraguay reached a new high last year.

ORGANIC CHEMICALS

Production of synthetic medicinals in the United States in 1937 totaled 16,613,806 pounds, according to preliminary figures released by the Tariff Commission as against the 1936 output of 13,250,004 pounds. Comparative figures for production and sales of certain individual synthetic medicinals of both coal-tar and non-coal-tar origin in 1936 and 1937* follow:

	1936			*1937*		
Item	*Production*	*Sales*		*Production*	*Sales*	
	Pounds	*Pounds*	*Value*	*Pounds*	*Pounds*	*Value*
Coal Tar:						
Acetanilide	569,338	593,304	$119,608	986,429	950,827	$189,739
Acetylsalicylic acid (aspirin)	4,385,533	4,115,308	2,208,679	4,997,453	5,143,672	2,624,133
Phenobarbital	99,665	90,147	486,842	94,185	92,171	419,390
Phenobarbital sodium	7,985	8,470	56,447	9,291	10,527	40,958
Benzaldehyde	.....	.....	.....	73,086	65,744	54,144
Phenolphthalein	.....	.....	.....	460,400	.....	.....
Salicylic acid	3,661,560	2,191,239	604,051	4,402,889	2,283,420	610,549
Non-Coal-Tar:						
Aminoacetic acid	56,801	55,015	$96,433	116,344	105,405	$195,879
Barbituric acid derivatives—total	123,517	75,571	589,801	119,835	67,844	419,457
Iodoform	9,906	9,519	34,444	12,537	.....	.....
Methyl iodide	431	415	1,955	515	459	2,319
Terpin hydrate	49,500	.....	.....	75,475	.....	.....
Thymol iodide	6,603	6,155	20,547	7,507	6,000	18,603

*Preliminary.

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